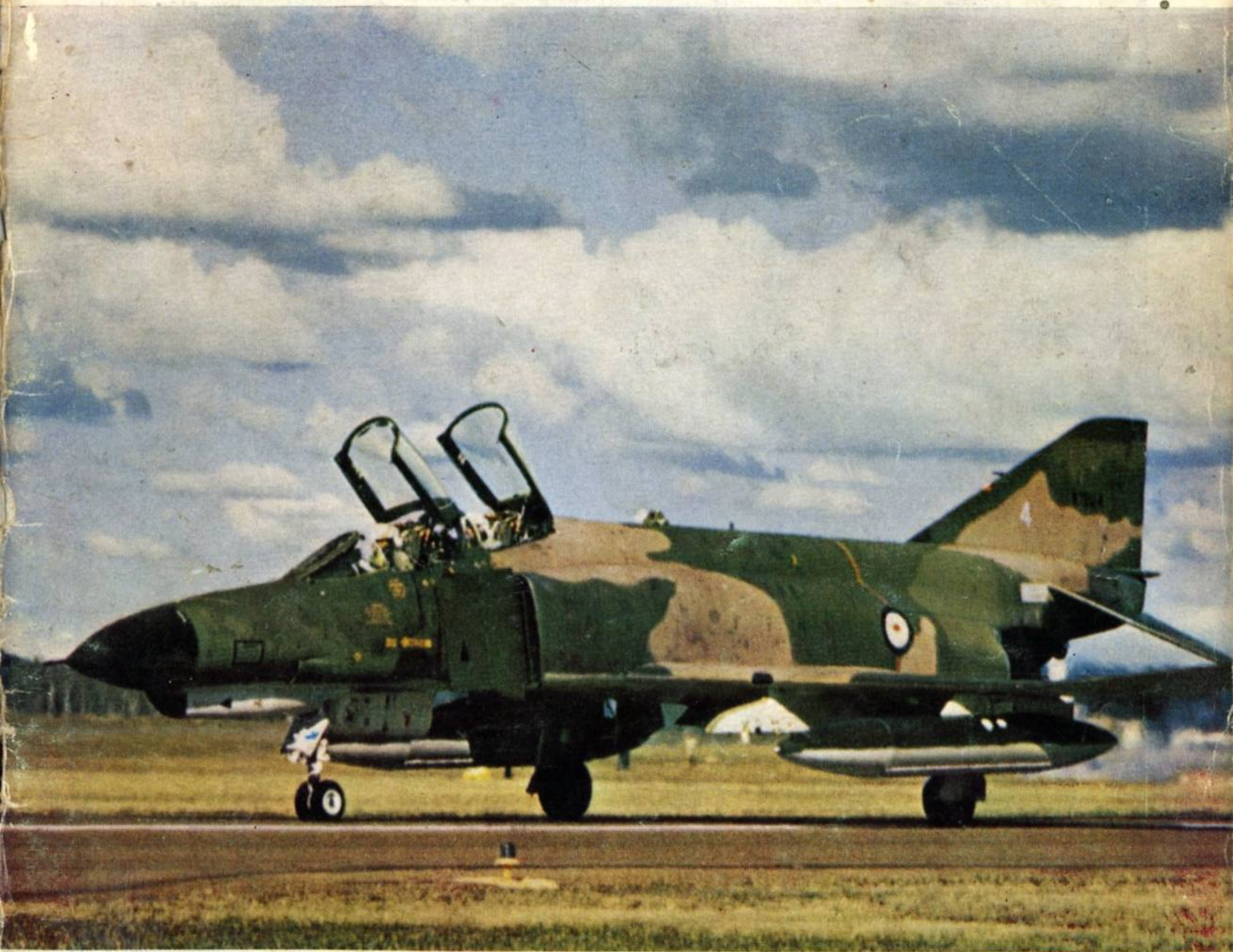


AIRFIX magazine

FEBRUARY 1972

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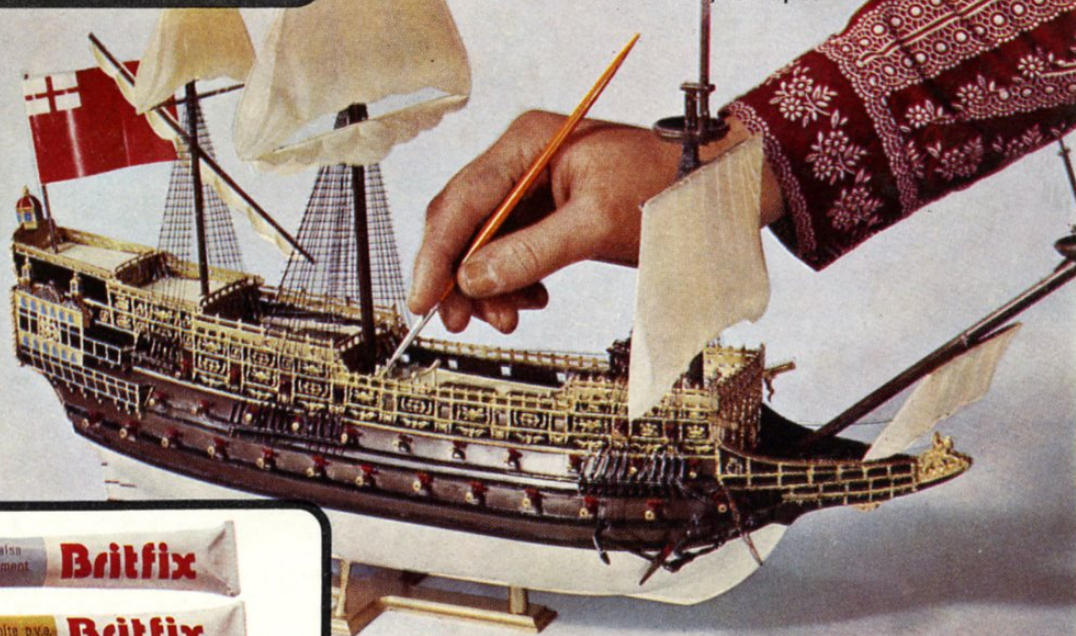
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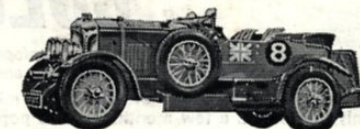
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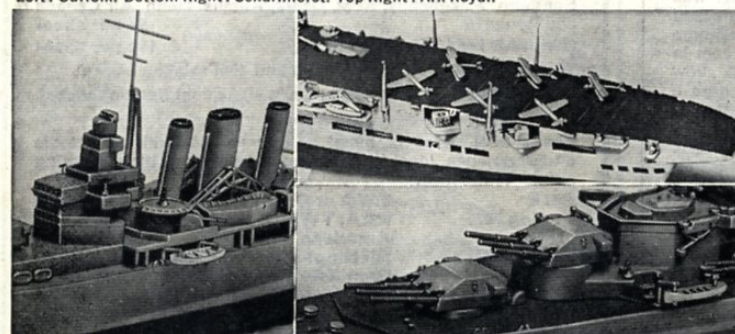
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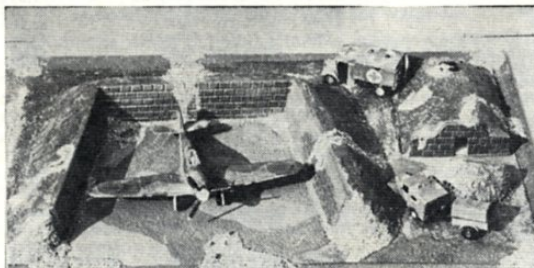
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AIRFIX

magazine

FOR PLASTIC MODELLERS

Volume 13 No 6

February 1972

Editor: Chris Ellis

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Cover Picture

The Royal Australian Air Force became a user of the Phantom late in 1970 when 24 F-4Es were supplied on loan from the United States pending delivery of the much-delayed F-111. The RAAF Phantoms equip 82nd Wing at Amberley Air Force Base near Brisbane. This machine, serial 97284 in black and code 4 in white, was pictured waiting to take-off in April 1971. The colour scheme follows the standard USAF pattern of green, dark green, tan, and grey, and the stencil and maintenance marks are similarly placed. The RAAF 'kangaroo' roundels are carried in four positions only, one each side of the fuselage, one on the upper port wing, and one on the lower starboard wing. This Australian Phantom would make an interesting finish for the recent new Airfix Phantom kit since the colours are readily available in the Humbrol range, the serials and codes are simple, and RAAF roundels are available from the Frog Sabre kit.

(Photograph by Glenn Ludgate)

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February 1972

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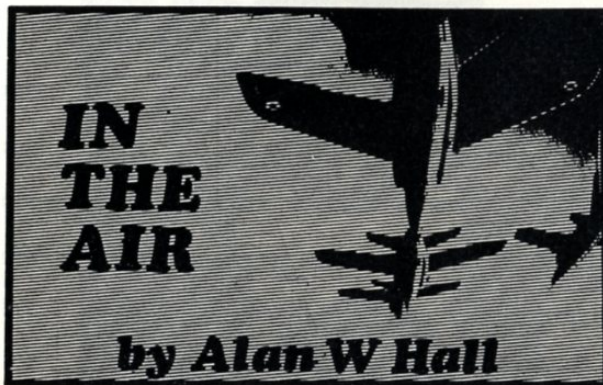
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MEMBER OF THE AUDIT
BUREAU OF CIRCULATIONS



The Good Year blimp Columbia, one of three now in service in the United States, is similar to the airship at present being built at Cardington, Bedfordshire. This will be used for passenger flying, aerial advertising and TV coverage of national sporting events. It is the first airship to be built in the UK since the early 1950s.



NO 360 Squadron, which has just been transferred from No 90 (Signals) Group to No 1 (Bomber) Group RAF Strike Command, has just completed the first five years of its service. Based at RAF Cottesmore, Rutland, No 360 Squadron provides electronic counter-measures (ECM) training for the Navy, Army and Air Force at home and overseas. This involves teaching the defensive elements of the three services, how to operate in an ECM environment.

The squadron strength is made up of 75 per cent RAF and 25 per cent RN personnel and is totally integrated. One of the three senior squadron officers—the squadron commander and two flight commanders—is always provided by the Royal Navy. At present one of the flight commanders is the senior naval officer but it is likely that the next squadron commander will be a Commander (RN).

The RAF and RN have operated ECM squadrons since the end of World War 2. In more recent years these were No 97 Squadron RAF, No 831 Squadron of the Fleet Air Arm, both of which were based at RAF Watton, Norfolk. The aircraft which these squadrons operated were becoming out of date and it was decided to replace them with a custom-built Canberra T Mk 17, a development of the Canberra B Mk 2. This development was expensive and it was, therefore, decided to create a joint RAF/RN trials and training force to operate the aircraft. This jointly established squadron was given the number 360, a number that has not been used before.

The force formed at Watton on April 1, 1966, equipped initially with one Canberra T Mk 4; the early months were spent in assessing the task the squadron would have and deciding how it should be tackled. The first Canberra T Mk 17 was received from the British Aircraft Corporation on December 1, 1966. The No 360 was confirmed officially on September 23, 1966. Now that the squadron has been operating for five years it qualifies for its own squadron badge.

Argentine Government re-orders the Friendship

THE Argentine Government has just taken delivery of a further two F.27 Friendship from Fokker-VFW. The two F.27 Mk 600 airliners have large cargo doors and provision for transport of both passengers and freight. The aircraft have been

modified and brought up to the same standard as the F.27s already in operation in Argentina.

The new order increases the number of F.27s ordered by the Argentine Government to 12. On July 24, 1968, they ratified a contract with Fokker for the purchase of eight F.27 Mk 400M Troopships. These are operated by LADE (Lneas Aereas del Estado), the Air Force's airline on routes which in many cases were not profitable for the regular civil airlines to fly. When the contract for eight Friendships was ratified in 1968, two F.27 Mk 600s were leased to meet LADE's immediate demand. These two aircraft were purchased in 1969.

The grand total of Friendship orders now stands at 518.

Air France places first Airbus order

AIR France has become the first of the world's airlines to buy the A-300 B airbus, the order is for six of the wide-bodied, twin-engined aircraft. Air France has also taken an option on a further ten aircraft. The version chosen is the A-300 B2 which accommodate three more rows of passenger seats over the B1. The first three aircraft will be delivered in 1974 and the second three in 1975.

The A300 B is powered by two General Electric CF6-50 turbo fans. Engines for production aircraft, which are identical to those used on the DC-10-30, will be assembled in Europe by SNECMA in France and MTU in Germany. The engines themselves will be manufactured by McDonnell Douglas in the United States.

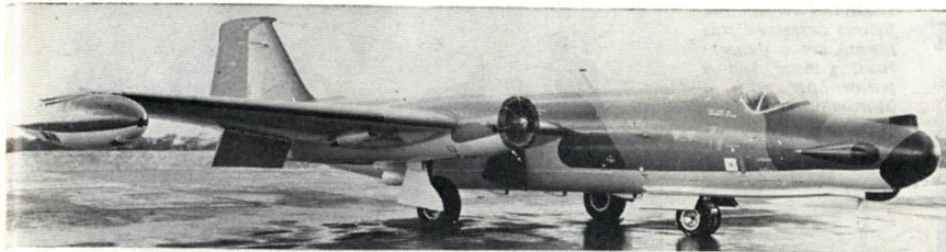
Airbus Industrie was formed in 1969 by agreement with the French and German governments. Later the Netherlands government became associated with the project. Design and manufacture are carried out by an industrial complex consisting of Aerospatiale in France, Deutsche Airbus (VFW-Fokker and MBB) in Germany, Hawker-Siddeley Aviation in the UK and Fokker-VFW in the Netherlands. An association with the Spanish industry is being negotiated and at the same time an order for the airbus from Iberian Airways is expected.

The major part of the fuselage is built in Germany, the main wing structure by Hawker-Siddeley Aviation in Chester, the wing moving surfaces in the Netherlands and the final assembly and

A model of the A-300 Airbus in Air France colours. The first of 10 now on order will be delivered in 1974.



AIRFIX magazine



The Canberra T Mk 17 electronic counter measures aircraft with its much modified nose and various other bumps and bulges associated with its task. Most of these aircraft are allocated to the joint RAF/RN Squadron No 360 based at Cottesmore, Rutland.

flight test development is by Aerospatiale in Toulouse, France. A prototype fuselage is already on the production line in Toulouse and the first set of wings arrived in Toulouse from the UK in November. The first flight is scheduled for the autumn of 1972 and certification in 1973.

Boeing 747s carry 15,000,000 passengers

BOEING 747s have carried 15,000,000 passengers on 100,000 revenue flights and flown 210,000,000 miles since going into service in January 1970. More than 150 747s have been delivered to 25 airlines. Total flying time for the fleet since first delivery is approaching half a million hours, including training and route-proving. Latest airline reports compiled by Boeing show that the total fleet average utilisation has been 9.5 block hours per aeroplane per day. In recent weeks this has risen to 10 block hours per aircraft per day. Boeing 747s are now serving about 70 cities in 35 countries throughout the world.

Airship to be built at Cardington

THE Good Year Tyre Company have recently announced that they have started work on the construction of an airship at Cardington, Bedfordshire. Work started before the end of last year and completion should be near by the end of April.

It is 40 years since the last commercial airship was built in the gigantic airship sheds at Cardington and the company have rented one of these from the Ministry of Defence for the new construction work.

The airship, which will be of the non-rigid type, will have a crew of two and capacity for six passengers. Apart from pleasure

Below: Odd markings for a Comet. Just to make sure that passengers don't get in the wrong aeroplane, Comet G-APDT had its purpose painted in large letters above the cabin windows (Aviation Photo News picture). **Bottom:** What's wrong with this Javelin? After an active service life it now rests outside the Guard Room at RAF Innsworth, Gloucestershire, but the grem-lins have been at work! Look at the serial and you will see that it is in the XM range way beyond anything allocated to this particular mark of aircraft. XH903, the real aircraft, served with both No 33 Squadron, 29 Squadron and No 5 Squadron as 'G' and went on display at Innsworth in August 1967 after it had been allocated the maintenance serial number of 7938M. The Ms became misplaced in the repainting early in 1970 and now this survivor of Britain's delta-wing fighter needs some further modification (S. G. Richards).



February 1972

flying it will be equipped to take aerial advertising and a TV camera crew so that national sporting events can be covered from the air. An associated team on the ground with specially equipped vehicles for the reception and onward transmission of TV pictures will go with the airship at all of these national events.

The Good Year Company have now built more than 300 airships of this type and three, *Columbia*, *America* and *Mayflower*, are at present in service in the US. The British-built version will be called *Europa*.

This is only the second airship to be built in Britain since the war; the first, which also came from Cardington, known as the *Bournemouth*, was completed in the early 1950s but crashed during an early flight into one of the hangars there.

Jaguar training starts

JAGUAR familiarisation and training courses have started at the British Aircraft Corporation Service School at Warton, Lancashire. Ten aircraft technicians from the Aeroplane and Armament Experimental Establishment Boscombe Down have attended the first familiarisation course at the school in anticipation of Jaguar flight evaluation trials to be conducted shortly at Boscombe Down.

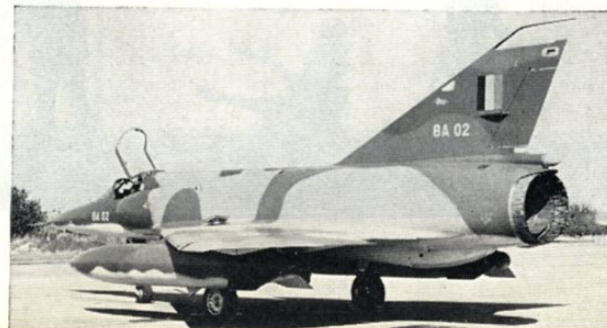
Training courses on airframe, engine, electrical systems, avionics, armaments and safety equipment are scheduled and a further training course for Boscombe Down technicians is planned for next month.

BAC has virtually completed its preparations for Jaguar training courses with new visual aids in the form of working models of the aircraft's systems. The production line at Warton and the Toulouse plant of Breguet Aviation are now in full swing and the first production aircraft made its maiden flight in France on November 2, 1971.

Sweden orders more Bulldogs

SCOTTISH Aviation has won its first repeat order for the Bulldog Primary Trainer, with confirmation by the Material Administration for the Armed Forces of Sweden that it is to buy a further 20 aircraft. These will be used by Swedish Army Units. The latest order follows an earlier one for 58 Bulldogs for the Royal Swedish Air Force and brings the total number of these aircraft now on order to 98. Sweden's Forsvarets Materielverk took an option on 45 Bulldogs in May 1970 and it is from these that the Army aircraft will come, leaving 25 still on option.

Below: This fine picture of a Belgian Mirage 5BA (the attack version) comes from Lieutenant W. Tersago of the Belgian Air Force with the suggestion for another possible Mirage conversion for modellers. Mr Tersago suggests using any Mirage IIIE kit with a new nose as used for other conversions. Two 700 litre drop-tanks are needed (3 $\frac{5}{16}$ inch long in 1:72 scale) and a modified belly tank. This view shows the distinctive shape for these items. For a Mirage 5BR (Belgian recce version) Mr. Tersago suggests converting from the Fujimi Mirage IIIR kit which features the exact nose shape.



Fallschirmjäger



By Robert C. Gibson

ALTHOUGH the Army's Fallschirm Infanterie Bataillon passed into the Luftwaffe in January 1939, a parachute battalion was later formed within the Brandenburg (special duties) Regiment, and used in small numbers against Yugoslav and other Balkan partisans. This unit was taken over by the Waffen-SS after July 1944.

The Waffen-SS boasted of two parachute battalions by 1944, one of which was involved in the seizure of the citadel of Budapest after Admiral Horthy's attempt to make peace with the Russians. They later fought in diminishing numbers in Lithuania and Poland against the Red Army as infantry.

The Brandenburg battalion, like the rest of this counter-intelligent unit, were more often seen in enemy uniforms than their own. Luftwaffe-style jumping smocks in the patterns shown in the earlier part of this series were worn with Army eagles in place of the Luftwaffe eagle. Also the standard Fallschirmjäger helmet was worn.

The SS paratroopers wore the Fallschirmjäger helmet with SS markings,

Below: Rear view of the two models shown at head of page, both made from Almark figures.



Right: Two of the figures described this month are a panzerfaust gunner and a paratrooper with a Sturmgewehr 44 carbine. The gun in the middle is the LG40 modelled in 1:32 scale.



camouflage smocks and helmet covers in Luftwaffe patterns but with the SS eagle and rank badges on the upper left arm. These latter took the form of dark green stripes or grey chevrons on a black background: One chevron for Lance Corporal, two for Corporal, one stripe for Sergeant (the ranks are the British equivalent). Officers had green bars surmounting a pair of oakleaves, up to the rank of Colonel. Arms and equipment were as for the Fallschirmjäger, often more modern.

Small Arms and Infantry weapons 1944-45

In 1944, many Fallschirmjäger units were equipped on a replacement basis with the Sturmgewehr 44, a large sub-machine-gun carbine of simplified design for ease of production. At the same time, a number of pre-war Bergmann sub-machine guns were also issued. Examination of relative specifications shows few differences between these weapons, indeed the Bergmann was a whole pound lighter, so much for progress!

In the same year, the Panzerfaust (Armoured fist) and Panzerschreck (Tank Terror) anti-tank weapons came into use: the Panzerfaust was ideally suited to the light infantry role, and the heavy two-man operated Panzerschreck which, unlike the US 'Bazooka', was a recoilless rifle, provided heavy support.

Infantry support weapons now included one Nebelwerfer battalion per division.

Modelling

This month we feature some more 54 mm conversions and a 1:35 figure for those who build AFVs to that scale.

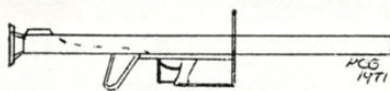
As Roy Dilley has shown recently (*Airfix Magazine* September 1971) the Almarks US Infantry can be used to

make late-war German Infantry, and here I have used the marching figure with the Panzerfaust from the Panzer Grenadiers to provide a more casual action figure. The pockets are filed down below the belt, and plastic putty is used to build over the ammunition pouches, back and front to give the bulged upper jacket effect, often seen on camouflage smocks. This version is the short one described last month.

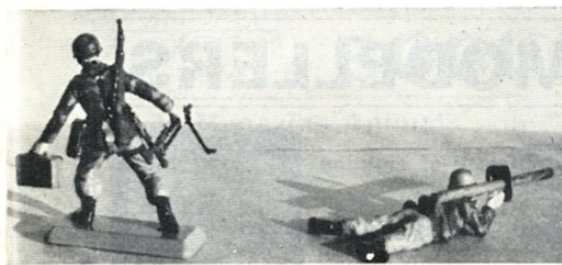
Another Almarks figure has been used to provide the Sturmgewehr 44 conversion. Figure 'E' from the Panzer Grenadier set is used with the appropriate arms. The rifle is cut off at the muzzle so that it is 27 mm long and a 5 mm barrel stuck on level with the bottom line. A 2 mm length of fine sprue is added above this and the foresight added from 1 mm x 2 mm scrap. At the butt end, the bulge in the lower line behind the trigger is smoothed out and the trigger guard carefully removed. This area is built up with a 5 mm length of 40 thou plastic card 1 mm wide, and pistol grip and curved magazine added from plastic card. The original trigger guard is now trimmed and replaced in front of the pistol grip. The belt and ammo pouches on this figure were painted Humbrol Mid-Stone to represent the optional canvas issue sometimes used.

The Britains 'Deetail' figure of an (alleged) machine gunner is used to make a Waffen-SS paratrooper. The 'machine gun' is mythical—it resembles an early anti-tank rifle and is best discarded. The Tamiya MG 34 is substituted here. The helmet is trimmed as for the Airfix figures, and the trousers built up with Plasticine hardened with banana oil. The collar of the existing tunic is trimmed to a semi-open position, and a new collar glued over this, cut from paper, thus simulating the short camouflage smock with a shirt or open-neck tunic underneath.

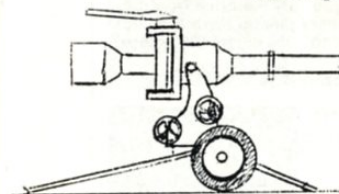
Finally, the Tamiya German Infantry machine-gunner is utilised for a Panzer-



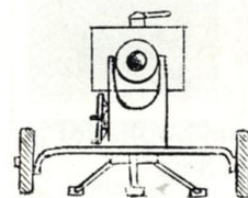
Panzerschreck (Panzerbüchse 54)



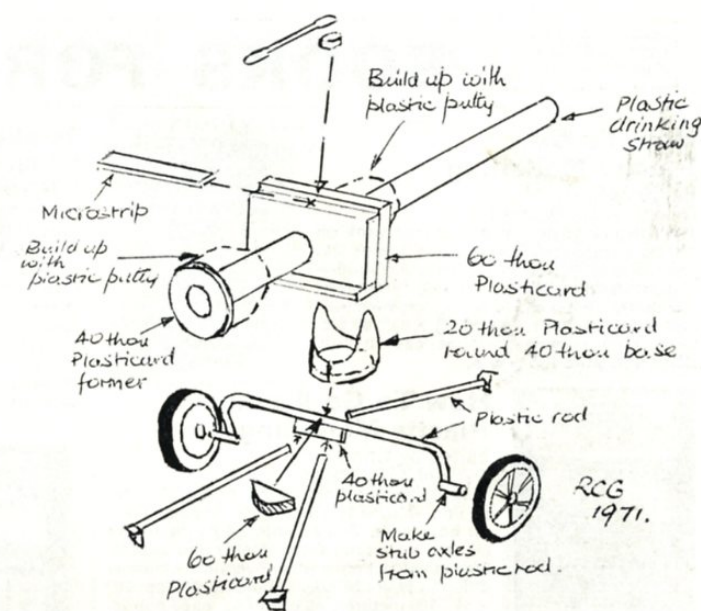
Above: Two views of the Waffen-SS paratrooper made from a Britains 'Deetail' figure and a Tamiya machine-gunner converted to a paratroop panzer-schreck gunner.



Luftgeschütz 40



RCG 1971



LG 40 - Exploded Diagram

schreck 'gunner', using the same arms. The barrel is a 49 mm length plastic drinking straw, fitted with a 9 x 10 mm shield from 20 thou plastic card with a 0.5 x 1 mm eyehole. A 12 x 2 mm strip of plastic is glued behind the shield along the bottom of the barrel, and the barrel attached to the man at the shoulder, and the pistol grip 3 mm behind the shield. Once attached, the guard can be added between shield and the butt of the pistol grip using a 1 mm wide strip of plastic card. The guard round the 'exhaust' of the tube is made from plastic rod formed with round-nosed pliers and glued into position. The figure is given baggy trousers using plastic putty, and the helmet cut and filed to shape.

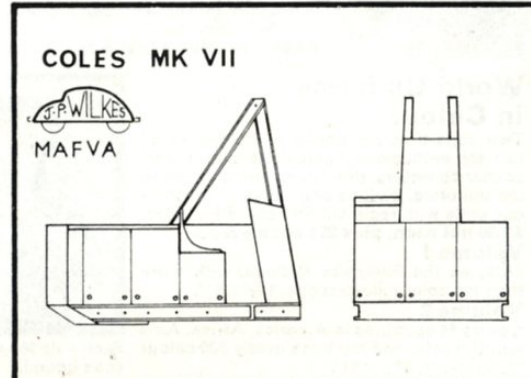
Finally, the Luftgeschütz 40 recoilless

gun. The diagram and scale drawing show most of the work to be done, but here are just a few points: The bulges in front of and behind the breech can be equally well formed of hardened Plasticine or of plastic putty; the two hand-wheels shown have been omitted on the model shown, but can be added using 88 mm gun parts; the carriage is made up entirely from plastic rod with a small length of plastic strip used in the model shown as a non-scale strengthener. (A small triangular wedge has been added aft of the axle to provide an adequate platform for the gun cradle.)

Next month's article, concluding the series, will deal with the NSU Kettenkrad and an earlier version of the LG 40 used in Crete.

More on the Amazon Coles Crane

J. P. WILKES, Manchester, a MAFVA member, sent us these drawings showing two views of the Coles Mk 7 Crane. These should be of assistance to any readers who are building the AEC or Thornycroft vehicles described by Gerald Scarborough in the January issue. They are based on measurements taken by Mr Wilkes from an actual vehicle which is stored at Preston. It can be seen that some of the dimensions vary from those given by Gerald Scarborough. A plan view is not drawn but the crane driver's compartment takes up one-third of the width of the crane body. It may possibly be that there was some variation in detail and dimensions of the Coles Crane varying with production batches. Whether or not this is the case, Mr Wilkes' dimensions are taken from an actual vehicle and can thus be taken as correct. Gerald Scarborough's drawing was based partly on a John Church drawing and partly on study and measurement of a different vehicle, as stated in the original article.

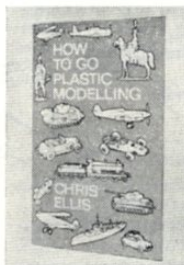


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Fighting Colours

RAF Fighter Camouflage and Markings, 1937-1969

By Michael J. F. Bowyer

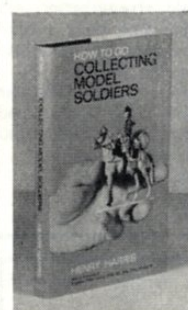
The author, a well-known contributor to *Airfix Magazine*, details the development and changes in camouflage and markings of Royal Air Force fighter types from 1937-1969, and lists the serial number allocations of every RAF fighter ever flown in that period. There are 139 individual drawings which depict specific aircraft in typical markings of the period. 192 pp, 8½" x 5½", 157 photographs, case bound. **£1.75 net, plus 13p p & p.**



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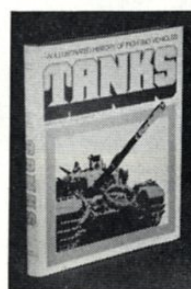
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CRUSADER IN CLOSE UP

Detail features of the Crusader tank high-lighted for modellers by T. J. Gander

THE recent appearance of the Crusader kit will fill a long-felt need for 'Western Desert' fans. It is an excellent replica of one of the best-known and most attractive British tanks of World War 2 and the finished model well captures the long low appearance of the original. However, many modellers will want to try and improve on the standard kit so this article sets out to suggest some improvements that can be made to the model.

Any kit conversion or improvement must always start with the research and investigation stage. Luckily the Crusader is one of the more documented AFVs and below is a list of reference sources that are readily available to most readers.

AFV Profile No 8. A must. This profusely illustrates all marks and variants of the Crusader with many of the 'in service' photographs that show kit stowage and markings.

Airfix Magazine. September 1968. This contains a good 1:76 drawing for scratch building a Crusader I and is a most useful source for details.

Airfix Magazine. February 1970 and May 1971. These both have colour front pages of Crusader Mk Is. The February 1970 issue is particularly valuable as it is a wartime photograph.

British Tanks and Fighting Vehicles 1914-45, by B. T. White, published by Ian Allan. A useful all-round reference book with good illustrations of all Crusader marks and variants.

The Bovington Museum Guides. A very good series that are inexpensive and comprehensive.

However, the above references are no substitute for the real thing. For most people this means a visit to the Bovington Museum which has on show a Crusader Mk III. The photographs of this vehicle illustrate possible detail alterations to the Airfix kit. By my estimation, incidentally, the Airfix model is fractionally too long by about one scale foot. This makes the model look a little too 'long' at the rear when it is compared to photographs. It is, in fact, fairly simple to reduce the hull and sand shield length to give a correct scale appearance.

Continued on page 314

Top of page: A Crusader command tank, showing the typical fitting of extra stowage boxes on the turret sides where a tow rope is also carried on this vehicle. Note the aerial housings.

Below: A good right side view of a Crusader I which should be useful for anyone trying to reduce the Airfix model to its correct length.

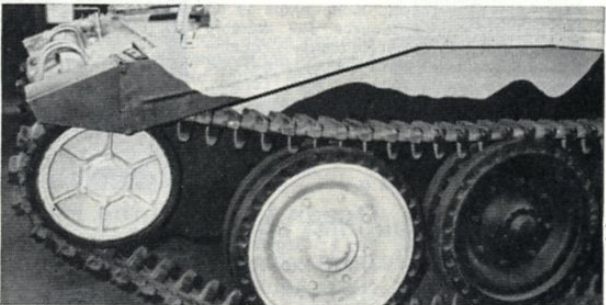


Photo 1: A general view of the repainted Mk III. Originally the vehicle was olive drab but the present colour scheme portrays Western Desert colours. This scheme would apply to Mk IIIs from El Alamein up to the Tunisian campaign but the sand shields as supplied in the kit would have been fitted. As can be seen, the vehicle on show does not have them. Instead there are small dust guards at front and rear. The larger shields were only fitted during the North African campaign so models of home-based and special purpose vehicles should have the smaller dust shields made up from thin Plastikard.

Some vehicles carried an extra stowage box on the front left-hand track cover. This could be adapted from a T-34 stowage box. Extra track links were sometimes carried in the same location.

Photo 2: A close-up of the front dust cover. The raised line can be reproduced by using a scribe or blunt knife edge on the back of the cut-out part. The wheels can also be used in many possible scratch-built models such as the Centaur, Covenanter and Cromwell.

Note the track sag which will have to be built-in if the large dust covers are not fitted. There are many ways of achieving this, but the simplest is to glue the track to the wheel tops using White Bostick or a similar adhesive.

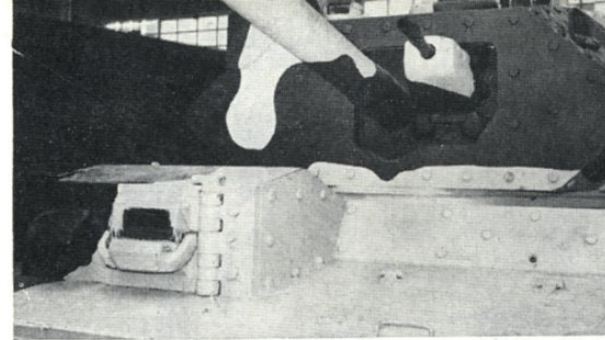


Photo 3: This photograph shows possible detail that can be incorporated by the real detail fan. Note the close fit of the hatch covering the former position of the auxiliary MG turret. This was often removed on Mk I and II tanks due to its cramped and poorly ventilated situation; the space was then used for crew kit stowage and extra ammunition. Those who would like to model something out of the ordinary could utilise a 6-pounder barrel (shortened by about 3 mm) on the Mk II turret. This would then represent the 3 inch howitzer used on the Crusader Mk II CS which saw only limited service.

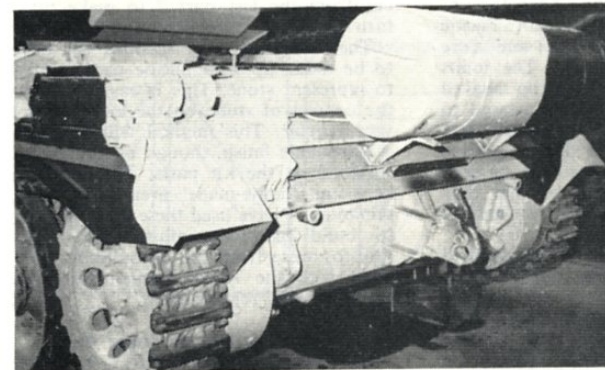


Photo 4: The rear of the model can be improved by lowering the auxiliary fuel tank position. On the model it sits rather high so the lower supports (Parts 75 and 77) should be shortened by 2-3 mm. A fuse wire pipe can be added from the centre top of the tank to a central position 2 mm from the top cover rear. Just visible in the photograph is an extra pipe leading under the engine cooling louvre. The two small rear lights are easily made from scrap as is the hook and towing eye detail. If one is available the towing hook from the Universal Carrier kit could be utilised.



Left: Climbing aboard a Crusader in the desert. Note the stringer attached to the sand-shields to which bedding, tents and personal equipment were fixed.

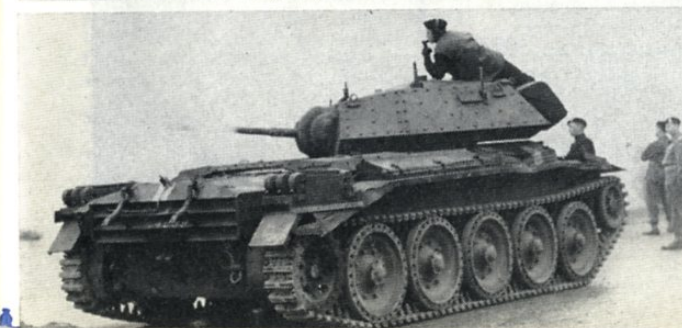


Photo 5: Still at the rear, this shows the smoke dischargers and stowage box detail. The small box catches can be easily made up from thin card scraps and considerably improve the appearance of any model. Note also the fire extinguisher clamp behind the rear stowage bin.

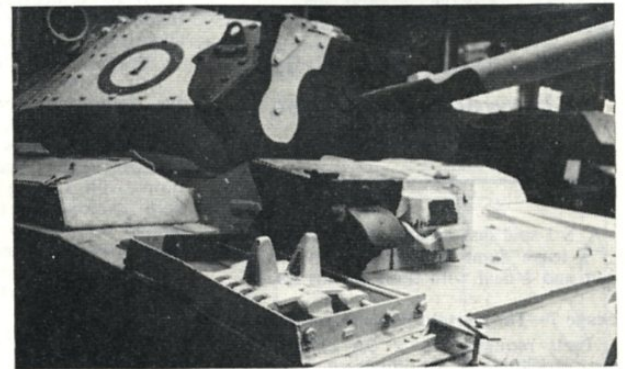
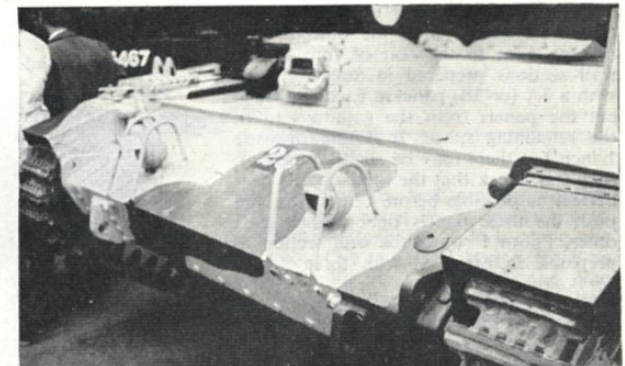


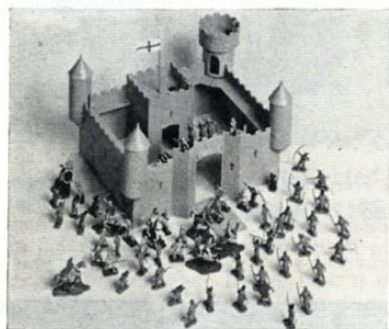
Photo 6: Main item to note in this photograph is the small triangular plate added to the right-hand turret front. The purpose of this plate is unknown to me but can easily be added by using an odd piece of card scrap. Note also the driver's vision slot on the outboard side of the driver's compartment. This can be scribed on to the model or added using a small piece of thin card. Any one wishing to model the Crusader prototype can add an extra Besa MG to the right of the driver's hatch. Note also the turret lifting eyes. These are rudimentary in the kit and can be added very easily.

Photo 7: Considerable improvement can be made to the hull front by cutting away the solid headlamp guards and replacing them with parts made up from fuse wire. Note the two guards are not identical.



Left: A good view of a Crusader at target practice, just firing its 2 pdr gun. Note the rear smoke emitters, the brackets for the external fuel tank, and the red/white/red RAC flash on the tail plate. Dustguards are slightly bent in characteristic manner (Imperial War Museum photos).

Medieval Castle



Expanding the Airfix Sherwood Castle set, by Terence Wise

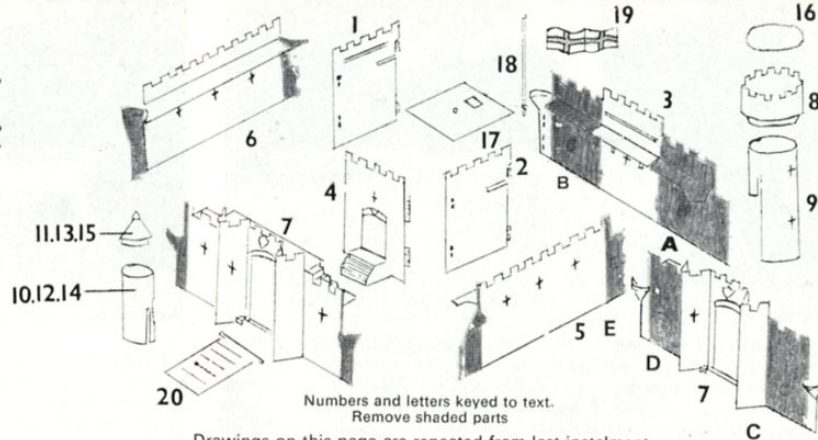
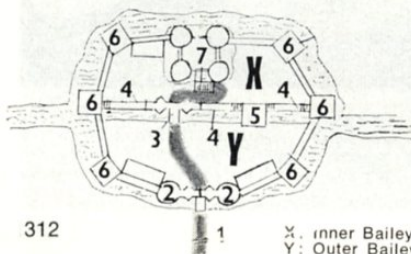
AS I said last month, the curtain walls leave some problems to be sorted out and I deal with these in this issue.

Stage 7—The Curtain Walls (reverse sides)

Parts required: 2 x 3A offcuts (see first article); 6 x 3B offcuts; 2 x 7 gateways with steps removed. Read this stage right through before starting work.

From the two parts 7 cut the flat pieces of wall flanking the vee 'towers', marked 7C and 7D on kit box plan. This gives you four panels of wall, each 1½ inches wide. Cut off the battlements, flush with the rampart. Each of these will now form the centre panel for the reverse sides of the curtain wall sections, and will be flanked by two parts 3A, or two 3Bs, each of which provides a panel 1½ inches wide. Saw the battlements off these parts (3As and 3Bs) also. In the case of the 3As the rampart curve must also be trimmed to the standard ⅛ths.

Turn all these panels upside down so that the rampart is at the bottom, and cement them to the rear of four of the wall sections prepared in Stage 6. Start with a 3A (or 3B) panel at each end, then cut the panels from the gateways to fit the remaining space. It should measure 1 inch but there may be slight variations. Similarly check that the joints are as near perfect as possible before cementing, and push the three panels tight against each other. Photo 1 shows the wall section as prepared in Stage 6, with three panels



Drawings on this page are repeated from last instalment

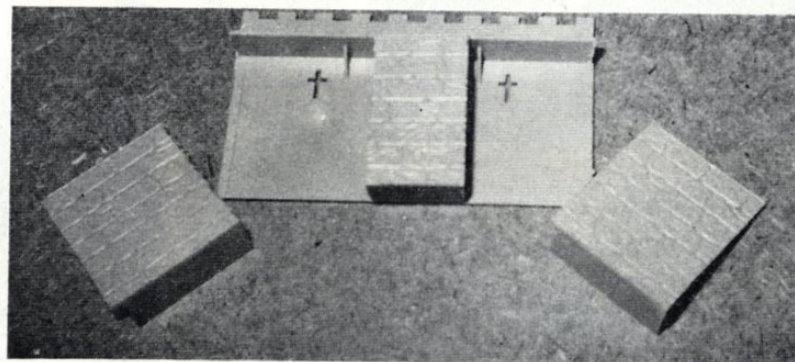
ready for cementing on the reverse. You might find the rampart of the centre panel slightly too wide and have to lightly file to obtain a flush fit.

Any arrow slits in this inner face of the walls must be filled with Plastic Padding. When set, shave level and score to represent stones as usual. The joints between panels should also be shaved down with a knife and stones scored to help camouflage them, although they should now be no worse than moulding lines elsewhere. Ensure the ends of each section are straight edged so that they make a good fit when butted up against the towers.

Up to this point it has been assumed that these curtain wall sections will be placed at right angles to the towers. However, this restricts your layout to a square or rectangle. If you want a more circular or flexible curtain wall, then the ends of some of these wall sections will have to be angled. This is easily done during construction by making your rear wall ¼ inch shorter at each end, ie, reduce that centre panel still more in width, then cutting the rampart to this new angle. My own wall sections are a mixed batch, giving the maximum in layout variations. Four have ¼ inch off each end, two are square at both ends, and the remaining two sections are angled at one end only. If you want extra wall sections, or wish to make 'damaged' sections for war-gaming, buy another kit.

This leaves us with four wall sections still uncompleted and the spare panels

Photo 1: A section of Curtain wall showing the three parts of the reverse side about to be cemented in position.



getting rather thin on the ground. You should have a 3B and five 3As. Four of the 3As are need for another job, so use the 3B, a 3A and another centre panel cut from the last part 7 to make up a fifth double-sided wall section.

The remaining three sections will have to be made up with plastic card, scored to represent stone. This is easy to do as the courses of stone on the kit parts are very regular. This method will give you a reasonable finish, though obviously not so good as the kit parts. Therefore, to keep the 'home-made' area down to a minimum, I have used these three sections to 'build' lean-tos against. Two of the lean-tos were from the outbuildings supplied with the Airfix Roman Fort set, the third was scratch built.

Stage 8—Stables for the Outer Bailey

Parts required: 14, 15, 16, 17 from the Roman Fort set and one wall section as prepared in Stage 6.

Cut a strip of plastic card ⅝ by 4½ inches and cement this along the back of the wall section, ¼ inch up from the bottom. Support it with triangular offcuts, as for the second rampart suggested in Stage 6. Cut another piece of card 4½ inches by 2½ inches and pencil in courses of stone to match the Airfix stonework. You will need only a ¼ inch strip along the top edge and ¼ inch at each side. Score these lines out with a pointed tool. I find the end of the triangular file best for this job, pushing it away from you. If it slips, incorporate

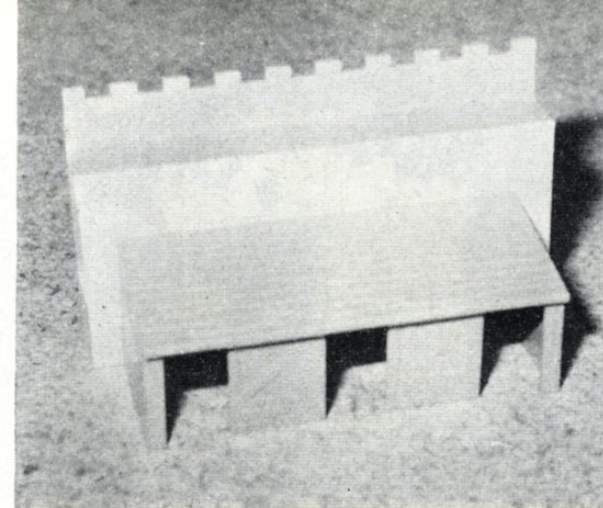


Photo 2: The completed Outer Bailey stables before painting.

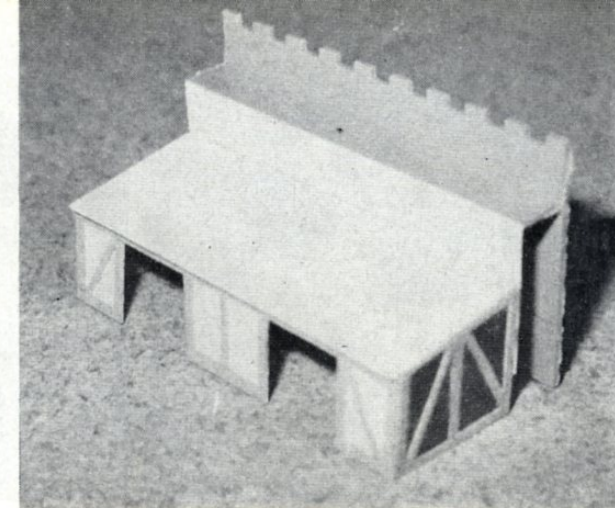
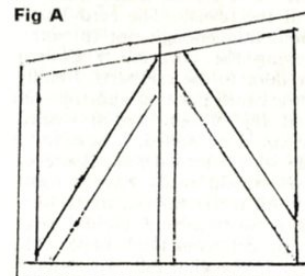


Photo 3: The cart sheds assembled, before painting. Note the bracing, which is shown in the diagram below.

Fig A



Drawings are full size for model

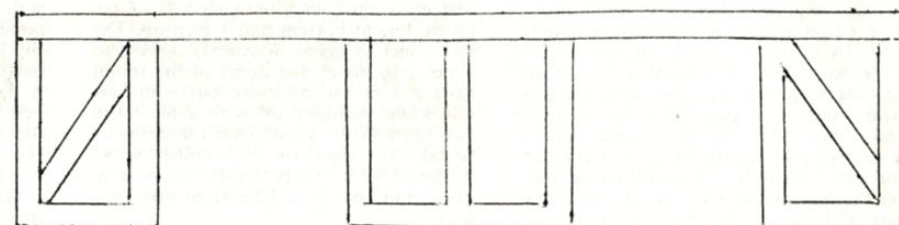
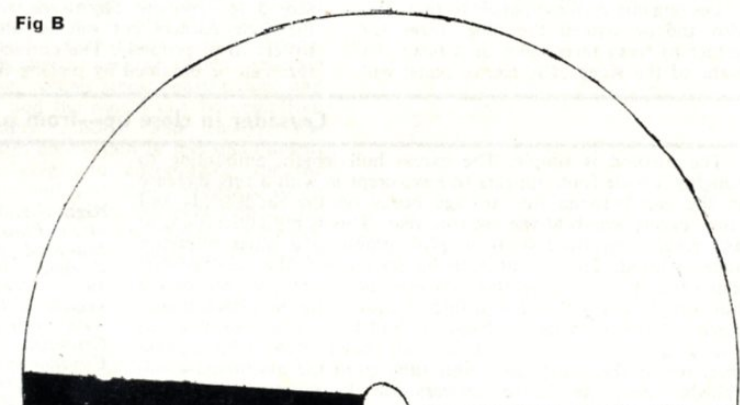


Fig B



the error into the design! When you've finished make sure the grooves are clean, this being important for the painting.

The lean-to roof (part 17) should slope away from the wall. This can be done by removing the panels with lugs from each side of the front panel (part 16), then cutting off the top of this panel along the line of the beam over the doors. Care must be taken when doing this, for until the lean-to is assembled, the lintels over the doors are now rather fragile. Cement the sides (14 and 15) to the front panel, behind the front, not overlapping as designed, for the roof is only as long as the front panel.

Now remove the panels with lugs from each end of the roof and cement it in position, flush at the rear. Make sure the lapping of the roof goes the right way to keep the rain out! Complete the assembly by cementing the lean-to to the prepared card, and card and lean-to to the rear of the wall section (Photo 2).

The lug holes at each end of the stables can be filled with Plastic Padding, as also should be the slight gap caused by not being able to reduce the height of the front section anymore. I left the lug holes as they were, to represent ventilators.

Stage 9—Stables for the Inner Bailey

A repeat of Stage 8, using parts 18, 19, 20, 21 from the Roman Fort set. Remove panels with lugs from the sides of front panel and roof, cut the front section down to the beam over the doors, and

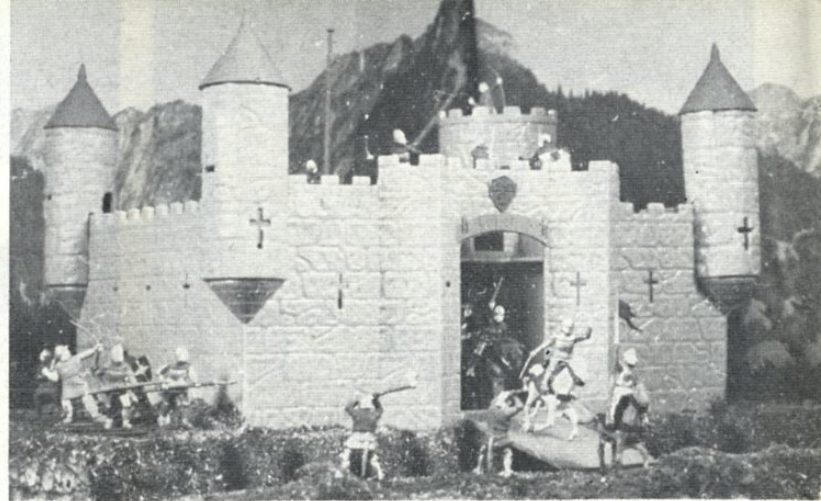
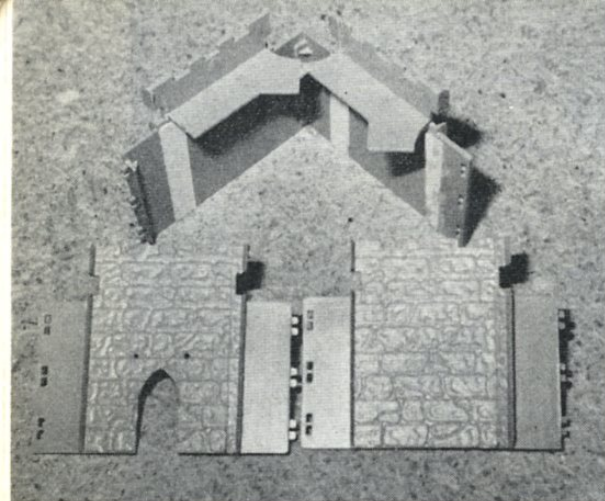
assemble as before, with the roof sloping away from the rampart. Prepare the wall section by cementing a second 'rampart' ¼ inch up from the bottom and score a piece of card measuring 4½ inches by 2½ inches to resemble stonework, restricting this to the top ¼ inch and 1 inch in from each side. Cement the lean-to to the centre of this card, then cement the card and lean-to to the wall section.

Stage 10—Cart Sheds for the Outer Bailey

This was built from scratch with plastic card. Prepare the wall section as before by adding the second 'rampart' ¼ inch up

from the bottom, and produce another piece of 4½ inches by 2½ inches scored to resemble stone for ¼ inch along the top only. Cut two sides and a front as shown by Fig A (actual size), and glue ¼ inch strips of card as shown on the drawings to represent the timbers of the structure. Irregular edges here are all to the good, as the timber would have been roughly trimmed with an adze. The roof was made from a piece of 4½ inches by 2½ inches card, scraped repeatedly across the blade of the saw, held in a vice, to give the effect of thatch (Photo 3).

Continued on page 314



Above, left: Photo 4 shows the Keep sections as modified. Above, right: T. L. Hammeeteman of Leiderdorp made this fine diorama, complete with backscene, using the unaltered castle mounted on scenic base made up from foam ceiling tiles. A moat is incorporated.

Medieval Castle—from page 313

Stage 11—The Keep

Parts required: 4 × 9 (round tower); 4 × 8 (tower top); 4 × 16 (tower floor); 4 × 3A offcuts; 4 × 5E offcuts.

To each part 3A cement a 5E offcut, so that they become short wall sections with panels and chamfered lips at each end. (Where the two parts meet cement a strip of card up the back to strengthen the joint.) With the stonework facing you, on the left should be a panel with three sets of holes, on the right a panel with three sets of lugs. Photo 4 shows the four sections.

Leaving one of these panels to one side, clip and/or cement the other three together to form three sides of a box: the walls of the Keep. The fourth panel will

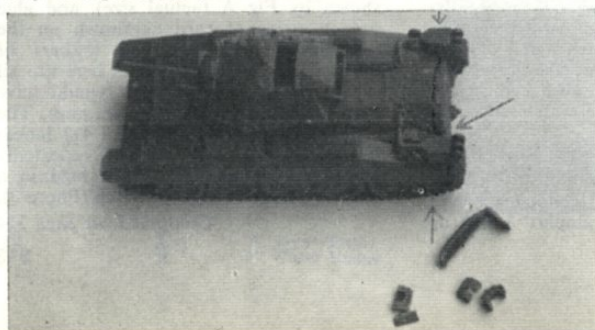
form the side with the door. Centre of the wall section on this fourth panel is $\frac{3}{4}$ inch from the side of the wall. Make the door 1 inch high on this centre line and mark off $\frac{1}{4}$ inch on each side of the centre line at bottom and $\frac{1}{2}$ inch up. The last $\frac{1}{2}$ inch is drawn freehand, curving to a point to match the doors in the round towers. Cut the doorway out with saw and knife, finishing off with a file. Drill two holes in the stones over the doorway to take the chain for yet another drawbridge. Use a 1 inch panel pin held in pliers and heated in a flame to make the holes.

A floor for the Keep is quickly made from a $3\frac{7}{16}$ inches square piece of card, scored to represent flagstones, and with the four corners cut out to allow the towers to fit properly. The correct curvature can be obtained by placing the floor

in position, slipping the towers on, and drawing the curve on the inside from the open top of the towers. The card I used was 10 thou, thin enough not to bother with removing the corners. If desired, cement the floor to the ramparts. Finally, slip the towers into position and top with parts 8 and 16, all cemented if wished. A flagpole could be added, a hole for it being made with a heated nail. However, these towers should really have a roof: See the unused turret towers, parts 10 to 15. Fig B is such a roof (actual size), which can be cut from thick paper. The shaded area is the glue tab. The roof is held up by a flagpole, $\frac{1}{2}$ inch being cut from its middle to make a pole $2\frac{5}{16}$ inches in length above the turret floor. These roofs could be removed for war-games. The paper should be marked to represent tiles.

Crusader in close up—from page 310

The method is simple. The excess hull length, amounting to roughly a scale foot, appears to have crept in with a tiny increase in the gap between the stowage boxes on the sandshields and some excess length at the extreme rear. This is my conclusion, at any rate, from close study of photographs and other reference sources listed. There is little to be done about the stowage box gap—and it's not noticeable anyway—but from the rear of the hull simply saw a slice 3 mm thick (omitting the hull back plate). Then cut the locating ribs from the hull back plate and glue this part inside the hull rear and flush all round. Now, with a razor saw, repeat the 3 mm slice, this time from the assembled sandshields. Omit the smoke emitters for the moment. Your cut removes some of the air filter mouldings. Now thin down the inside rear of the trimmed off sandshields to give a close fit round the tracks; cement in place, and add the smoke emitters. The picture shows the unpainted model with the saw cuts visible and the discarded slices of plastic alongside. This still does not give a 100% accurate model, but it looks right when compared carefully with prototype pictures.



Right: A line-up of the Polish 10th Mounted Riders Regiment in late 1942. Nearest vehicle is T44229 with a mixture of Crusaders and Covenanters beyond it. Crusader III turret in foreground (note Mk V 6 pdr gun) has a '4' in Cyrillic style (Photo by John Kurlowicz).



Left: Refuelling a Crusader in the desert, showing rear tank and fittings.

AIRFIX magazine

Basic layout planning

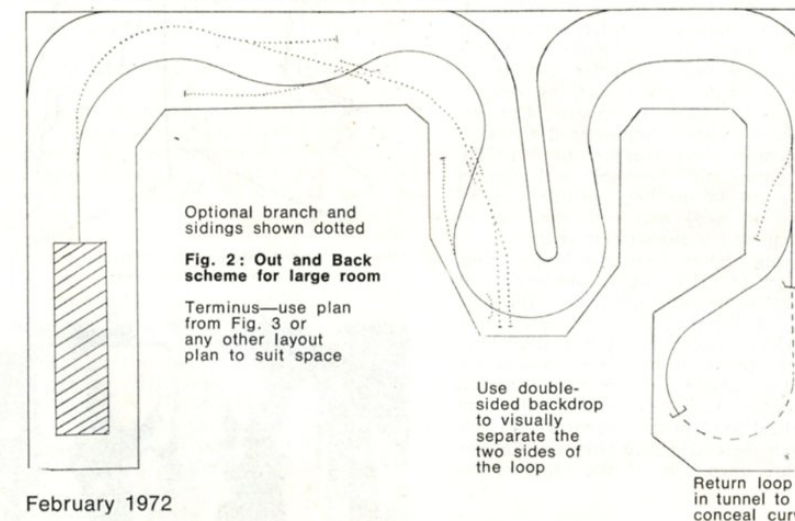
BY MICHAEL ADDRESS

A RECENT letter from a reader prompted this article. G.S. of Derby wrote: 'A space 16 feet by 7 feet has become available for me recently. I want to build a scenic layout. I have plenty of rolling stock but not enough Tri-ang TT scale track to put this board to its best use. I would be grateful if you could give me a few ideas.'

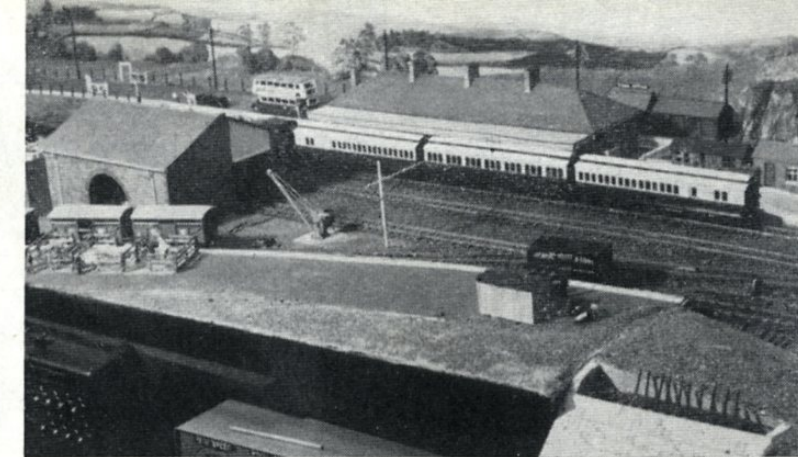
Unfortunately, due to lack of time, it is not usually possible to give detailed information or suggestions to individual readers or to draw up layout plans for particular sites. However, as other readers may also be in the situation of having a fairly large space for a railway but are uncertain how to use it, I felt some general comments may be of interest. I realise that for many modellers lack of space is the problem and I hope in a later article to give some suggestions regarding minimum space layouts. Although the enthusiast with little or no space for a layout may feel that to have a large area to use would be the answer to his dreams, there are pitfalls to be avoided when plenty of space is available.

I suspect from the rather general nature of the enquiry that G.S. is probably a beginner to model railway layout planning and construction. It is very easy, especially if the space is available, to fall into the trap of starting on an extensive and complex layout with large stations

Curved backdrop scene conceals corners of room



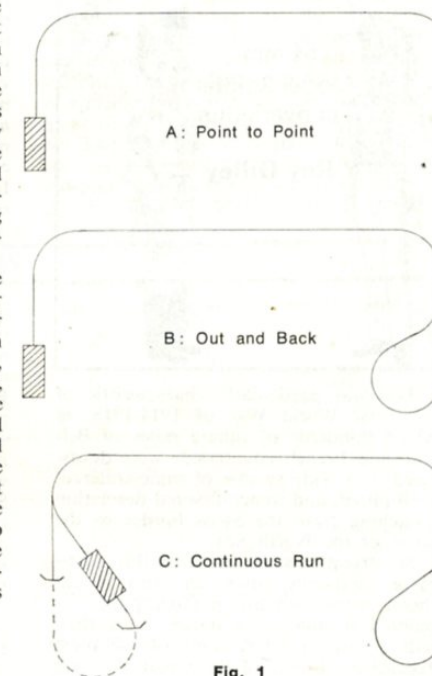
February 1972



Bert Lamkin, a frequent contributor to Airfix Magazine, has a huge model railway layout in the attic of his house, depicting the Helston and St Ives branches of the old GWR. Helston is shown here, built up as a single project before the rest of the line was attempted. Though this is part of a big system, for modellers with limited space or time a simple terminus layout can be a very satisfying and realistic project.

and many yards of track. These look fine in plan form and enticing when seen at exhibitions, but the task of building such a system may be too much for you both in terms of the work involved and the expense. Large and complicated layouts have been built by individuals, usually over a period of several years, but more often they are constructed, operated and maintained by groups of modellers working together or by clubs. Most of the big layouts which look so tempting at exhibitions are joint efforts of this type.

For the beginner a very good scheme is to build a small layout which can later be extended or incorporated into a larger layout. This allows the modeller to gain experience in many aspects of the hobby, baseboard construction, track laying, electrification, scenery and structure building, rolling stock construction, and so on, and the model can be completed reasonably quickly and easily. The successful completion of this small layout is satisfying and encouraging for the beginner and gives him confidence to go on to tackle a more extensive project. He has also had the opportunity to experiment with various modelling techniques

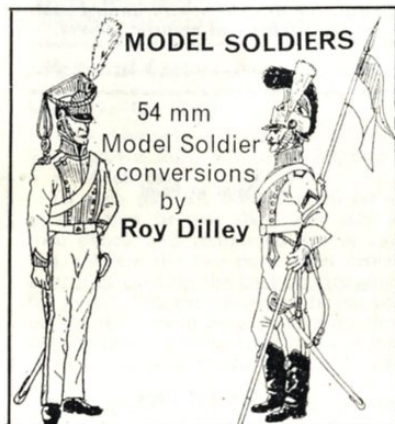


and to decide which aspects of the hobby have the greatest appeal for him. This will influence the type of larger layout he will want to build, main or branch line, scenic or operational emphasis, etc. If the small layout is carefully planned, interesting operation will be possible in its original form.

The area G.S. has available, 16 feet by 7 feet, is a large one. He does not say whereabouts it is situated; it may be a room in the house, or possibly the attic or cellar. If either of the latter it is important to make sure that it is suitable for a model railway; some cellars are rather damp, which can make operation unreliable, while some attics are very hot in summer. With a large space and a limited amount of track an around the

Continued on page 317

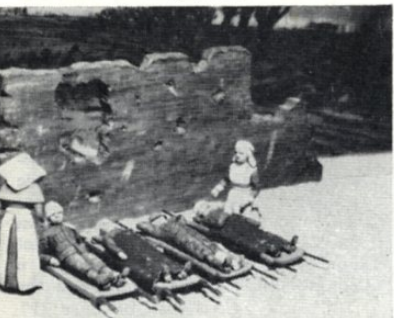
PERHAPS the most striking impression that one receives from study of the two great World Wars of this century, apart from the appalling casualty lists, is the extent of the damage and destruction caused to buildings and countryside alike. Such is the power of modern high explosive, and so efficient the means of delivering it to its target, that even without taking nuclear weapons into consideration, vast areas of cities or towns can be so reduced as to leave scarcely one stone standing upon another, whilst villages and hamlets can literally be pulverised into the very earth from which they sprang. Forests and meadows, woods and cornfields, marsh and heath, rivers and streams, can all be churned into the same featureless wasteland.



This was particularly characteristic of the First World War of 1914-1918, in which hundreds of square miles of Belgian and French countryside were devastated in a wide swathe of mine-cratered, shell-pitted, and trench-fissured desolation stretching from the Swiss border to the coast of the North Sea.

So strong was the effect of this nightmare landscape upon all who fought there, wrote about, photographed, or painted it, that even today, more than half a century later, some of the most evocative symbols of the Great War are

Below and far right: Roy Dilley's simple 'ruin' diorama in two different situations; below it forms part of a casualty clearing station and opposite it makes a setting for the Anglo-German Christmas Truce of 1914.



strands of barbed wire dangling from a post set on the edge of a shell hole, or fragments of shattered brickwork sinking into the mud.

Following the principle, which I have put forward in previous articles, for displaying or photographing models of fighting men or vehicles of a particular period in an appropriate miniature environment, enables one to convey a much more convincing effect. I have devoted my article this month to the production of a simple background item, in the form of the remains of a shell-blasted building. It may conveniently be used in a diorama, or as part of the 'props' for a photograph, and is equally suitable for viewing from all sides and angles, in a World War 1 or 2 context.

Materials employed in the construction of this piece are $\frac{1}{4}$ inch sheet balsa, thin plastic sheet, Unibond or balsa cement, and one of a range of ready embossed and coloured building cards, produced by Faller, the German railway model company, and representing various types of stone and brickwork. As templates to get the outline shapes of the ruined brick walls I utilised parts from the Airfix Strongpoint kit which has recently been released, but variations on these shapes can be used just as satisfactorily, and any illustrated book on the Great War will provide more than enough examples.

Commence by marking out on a sheet of $\frac{1}{4}$ inch balsa wood the outline shapes of the walls. I have shown an 'exploded' view of my model which has three ruined walls in the shape of a letter 'F'. Select balsa with a fine close grain, or alternatively a harder wood such as obechi, which is less likely to splinter. Cut out the shapes with a fine-toothed fret-saw, and cement them together to form the ruin, fitting the 'internal' wall into a groove cut in the long outside wall so a joint is made that will stand up to handling and transportation (Fig 2).

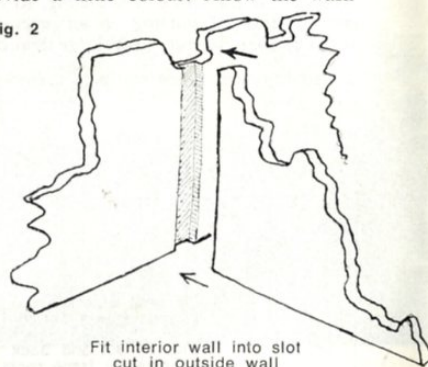
Having chosen from the Faller range the type of brickwork or masonry that you feel to be most appropriate for your model (I plumped for one representing red-brick), carefully apply Unibond or similar adhesive to the reverse and attach it to the outside walls, making sure that the corner where they join coincides with a vertical joint in the brickwork (Fig 3). Cut out the excess card from the window aperture, then trim all the edges of the

card back to the outline, and carve the wood edges to represent shattered brick. A glance at the photographs will show what I mean by this. Also at this stage cut the shell-splinter marks and gashes into the brickwork through the card covering, remembering that a really sharp and pointed craft-knife or scalpel is essential to this operation if splintering of the wood is to be avoided.

All exposed portions of the wood, including the insides of the walls, are now coated with a matt paint to match the main colour of the printed brickwork on the card, and then allowed to dry thoroughly, after which any inadequately covered areas can be re-painted.

Next, cut some irregular shapes from $\frac{1}{8}$ inch plastic sheet to represent the plaster still remaining on the inside walls, and stick it in place with Unibond, having first scored the plastic to provide a key for the adhesive. Carve out more splinter and shrapnel marks in the plaster and exposed brick surfaces, tinting in with the matching colour. The plaster is now painted a neutral buff, and 'crack' lines are marked on with a black lead pencil. Finally, coat the whole model with a wash of grimy brown, which should be mostly thinner with just a touch of paint to provide a little colour. Allow the wash

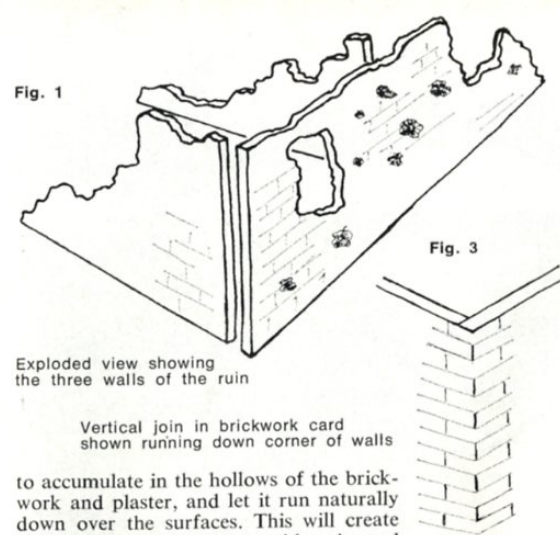
Fig. 2



Fit interior wall into slot cut in outside wall



Fig. 1



Exploded view showing the three walls of the ruin

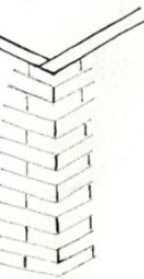
Vertical joint in brickwork card shown running down corner of walls

to accumulate in the hollows of the brickwork and plaster, and let it run naturally down over the surfaces. This will create a 'weathered' appearance with rain and damp marks portrayed most realistically.

The interior can be filled with 'rubble', made from chopped up plastic sprues painted brick coloured and weathered, into which a few battered balsa 'planks' can be thrust to represent the remains of floorboards and roof rafters. If it is desired to show a winter scene, as I have done for the photographs, a salt and alum mixture can be applied to the edges of the walls, and over the rubble.

Although an easy piece to make and paint, this basic ruin can be a valuable

Fig. 3



aid in the realistic presentation of your figures, and is well worth the expenditure of a few pence for materials and an hour or so for the construction.

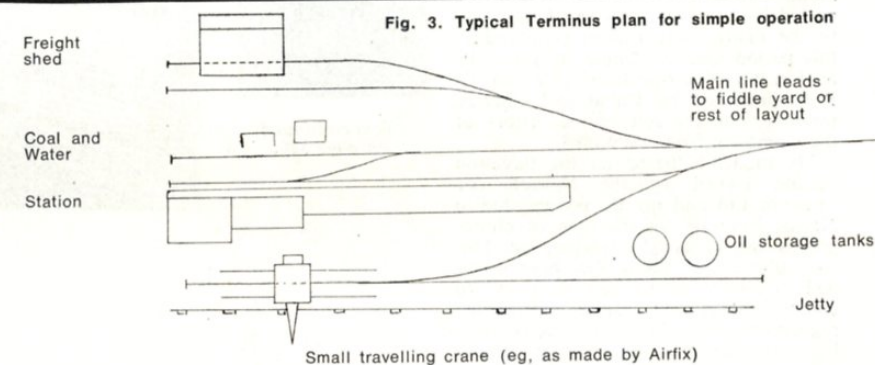
Those wishing for a more ambitious project can apply the same principles to turning the Airfix Strongpoint kit into a really de luxe model. The walls can be thickened with balsa and covered on the inside with sheet plastic 'plaster'. Plasticine moulded over a card or plastic former before painting can be employed

Basic layout planning—from page 315

wall branch line layout would allow the scenic side to be fully developed with a very effective result. The type of layout taken along the wall around part or almost all of the room is more realistic scenically than the island type of layout; in the latter the whole layout can be seen at once, whereas in the former scheme only part is visible from any one viewing position rather as in real railways.

The layout can be of the point to point type, the out and back, or a continuous run arrangement (see diagrams). The length of run can be increased by forming a loop or loops extending out into the room; a scenic background can be used to visually separate the two sides of the loop, thus making the length of the line seem greater. An alternative to a TT scale country branch line for G.S. might be a 3 foot gauge line in 4 mm scale using the 12 mm gauge TT track and the TT rolling stock underframes with new bodies. I have suggested a branch or narrow gauge line so that single track will be in order; G.S. has said that his stock of track is limited and anyway single track is preferable as it makes the line appear longer. It also takes less time to lay than double track and the time saved will be useful for scenery construction for the large area involved.

I have illustrated the ideas discussed above in the sketch plan for a layout suggestion. Such a railway could be built up in stages. The terminus section would be a good place to begin as when completed it could be operated with a simple fiddle yard. Then the line can be extended



out from the station; at any stage in construction operation is possible by fitting the fiddle yard to the end of the track. When the basic line is completed, and as time and money are available, the operating potential of the line can be increased by adding sidings at various points to serve a mine, quarry, factory, distillery, or what have you, and perhaps by the addition of another line from the terminus making it a junction, with a corresponding increase in traffic. From the scenic point of view the possibilities in such a large area are almost limitless. A harbour would be a very interesting and effective addition and would also provide extra trains (fish, oil, etc.). A river or canal meandering through the countryside to reach the harbour will provide the excuse for a variety of bridges where the railway and roads cross it and

will also give you the chance to model such attractive scenic features as locks, boatyards, watermills, and a variety of working or pleasure boats.

Believe it or not but the really effective modelling of the terminus and dockside layout in the final drawing could represent a year or more of work for a single modeller. Even this small layout offers big operating possibilities, however. Apart from passenger traffic, there is the oil storage depot allowing tanker traffic (and a model tanker in the harbour too), other cargo, like fish, coal, or general merchandise coming in or going out via the dock and, finally, local freight traffic being dropped or collected at the goods shed and siding. This activity alone can keep a single operator very busy during a running session, especially when working to a timetable and train order scheme.

Modelling a Tasker's Queen Mary Semi-Trailer

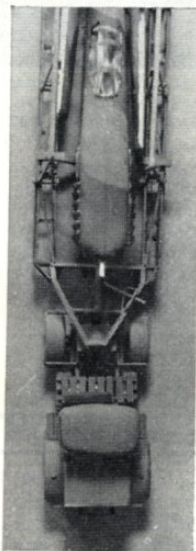
A project based on the
Airfix Emergency Set

by Gerald Scarborough

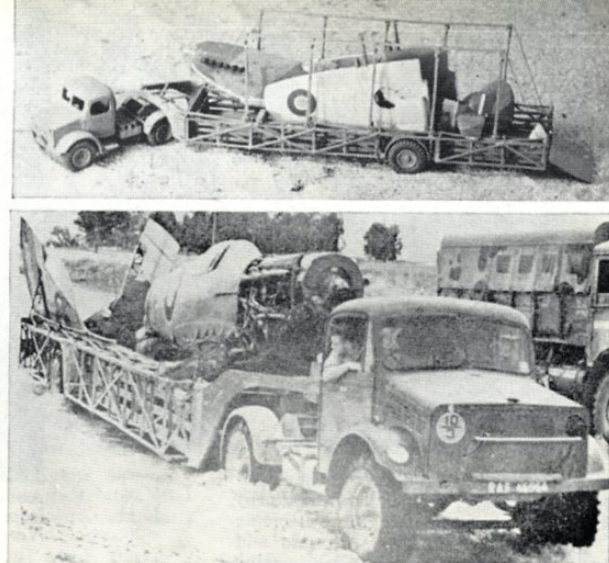
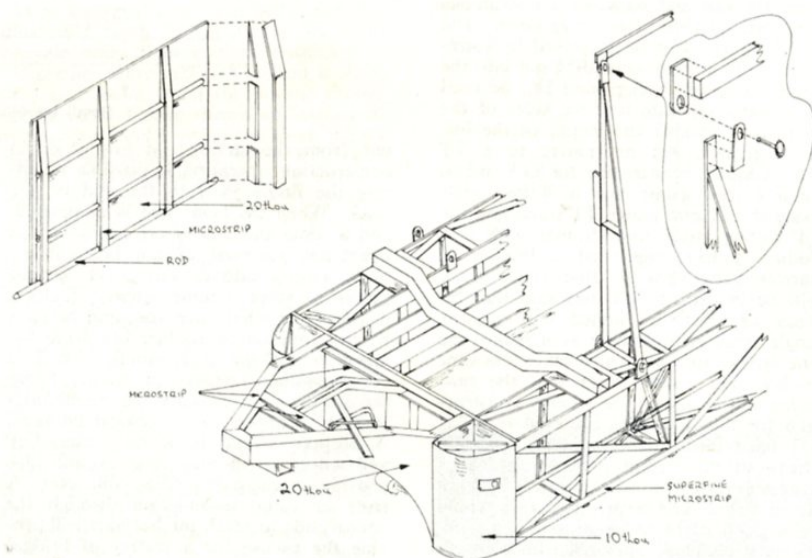
AT the time of the Munich crisis in 1938 the Air Ministry realised there was an urgent need for a low loading trailer to transport complete fighter aircraft. Taskers, among other trailer manufacturers, were asked to submit a design within seven days. Taskers chief designer, Mr H. O. Doughty, duly turned up at the Ministry at the appointed hour complete with detailed tender, and drawings to meet the specification, and an invitation to view a demonstration of the prototype in three days' time. 'Impossible!' was the cry, but sure enough Taskers had in fact a prototype all ready within 10 days of being given the specification. Subsequent trials led to production orders, turnover jigs were constructed and, before long, Queen Mary's were being produced at the rate of one every three hours, night and day, with a total of 1,859 of the three-ton model and 1,975 of the five-ton, in the period 1939 to 1945. This was in addition to the many other trailers produced at this period and the whole story can be read in *Waterloo Iron Works*, by L. T. C. Rolt, published by David and Charles, together with the rest of the history of the Company from 1809-1968.

My model is based on the three-ton version owned by the Newark Air Museum Ltd and my thanks are due to Neville Franklin for the loan of photographs and his rough sketches, etc. This particular trailer has in fact been modified to take a modern coupling and to comply with current braking and lighting regulations but these alterations have been ignored and the drawing should represent the original layout. This is not a project for the faint hearted as it requires a lot of patient and delicate work.

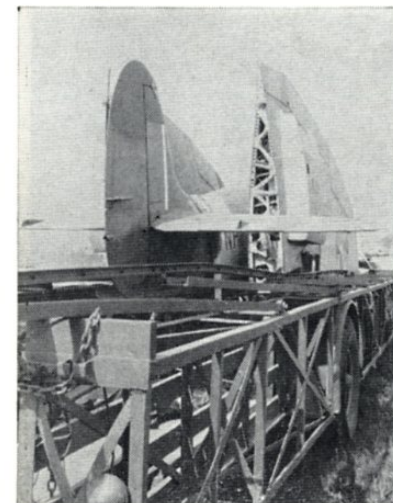
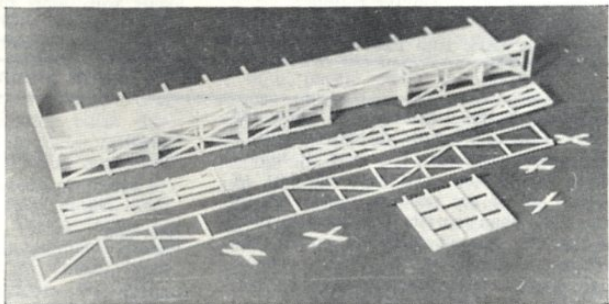
The original is of nearly all angle iron construction but to reproduce this in 1:76 scale is asking a bit much, so we can simplify construction by using 30 thou x 20 thou Superfine Microstrip with some parts that come from a packet of assorted Microstrip. Start with the floor from 20 thou plastic card, with planking scored in as the drawing, adding the full width cross members underneath from Microstrip. We can now start on the inside side pieces and here you will have to trace the drawing and turn it over to give the other side. First, cut out the solid planked section behind the wheel from 15 thou plastic card, scoring in the planking as for the floor. When doing these 'scoring' jobs do not press



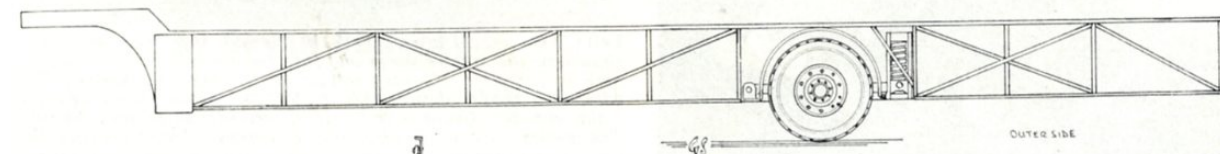
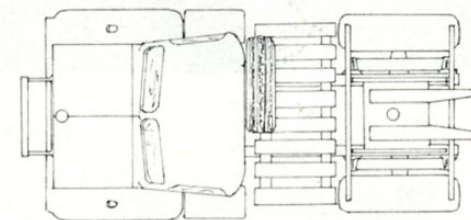
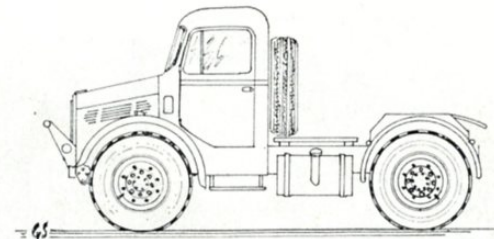
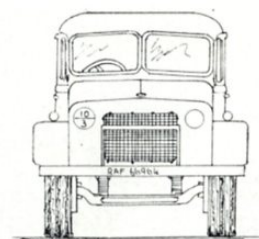
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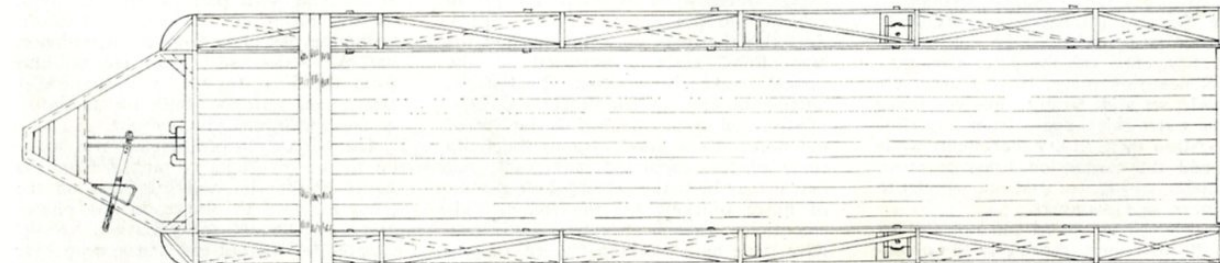
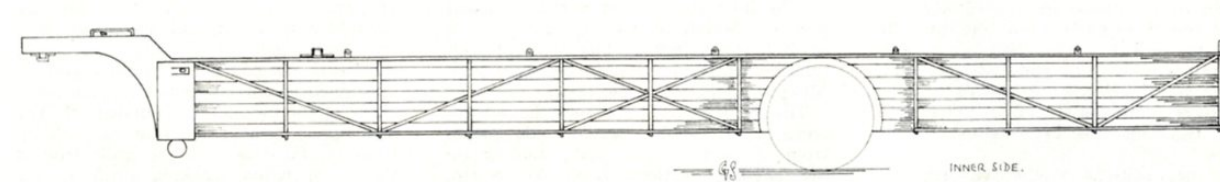
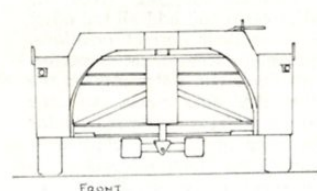
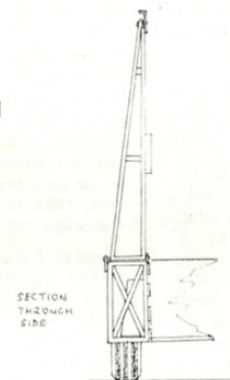
Above: The real vehicle compared to its duplication in miniature. This very spectacular model makes an ideal showpiece to take its place in a collection of aircraft models. The Airfix Spitfire IX breaks down in a very similar way to the real aircraft and it makes a perfect miniature load for the completed model. Left: Aerial view of the model with Spitfire in place. Below: The Queen Mary trailer under construction. While a lengthy construction job, it is not difficult to make in 1:76 scale if care is taken. Here the far side is ready to add to the deck and chassis. Bottom: Detail drawing of front end construction.

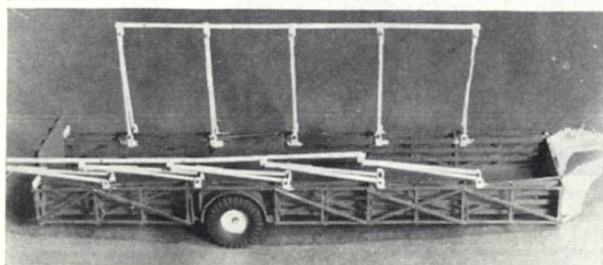
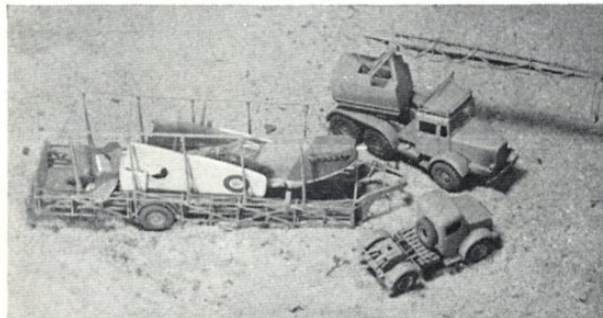
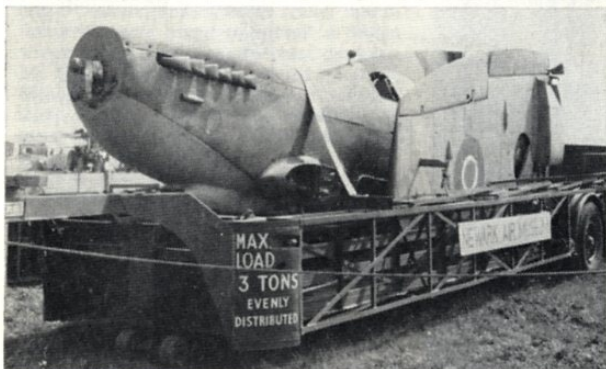
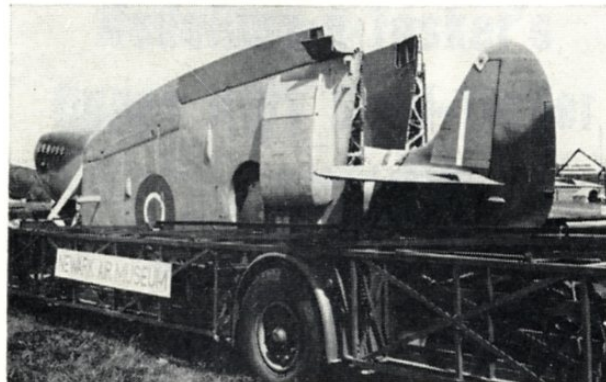


Rear end detail on the Queen Mary trailer which is preserved at Newark Air Museum. Note Spitfire wing root detail.



1:76 scale





Left: Two excellent views of the Newark Air Museum trailer show how the Spitfire wings and fuselage are secured. The aircraft here is a Spitfire 16, very similar to the Mk IX. **Above:** The completed model shown with its Bedford prime mover and the Coles Amazon Crane which was described last month. **Below:** The trailer with its folding side extensions. These are actually pivoted on the model shown but could be made as folded dummies.

too hard on the card, otherwise it will tend to curl. Use Microstrip of correct size for the timber strips running to the front and rear of the solid wheel section to which they are butt jointed. Reinforce the joints with the uprights from the Superfine Microstrip and add all the other vertical pieces in their correct positions. Add the diagonal pieces from Superfine strip but note these run differently on the inside and outside side pieces, so take care on this point. This is the reason for the extra drawing of the side elevations, one representing the inner side construction and the other, the outer. The photographs of the model in construction will show how these parts should be, but note it is as well to paint certain sections before assembly. You will also note that, at the wheel position on the outer side, the lower 'longeron' is left in place until after this side has been added to the inside.

At the positions of the 1st, 3rd, 5th, 7th 8th, 10th and 11th uprights we must now construct the X-shaped sections to brace the side frames. These are from Superfine strip and must be constructed accurately, otherwise the outer sides may not fit neatly in place. Having got these all made, set aside to dry while you make up the outer sides, again from Superfine strip. Allow these to dry thoroughly while you add the suspension brackets arms, stub axles, spring, etc (but not wheels) to the inner side members.

The body front board can now be cut from 20 thou sheet, scoring in the plank-ing as usual. All the various bits should

now be ready for assembly but first, as previously mentioned, do all the main internal painting, leaving clear where future joints will occur.

Start by adding the front board to the floor section, then add the inner sides using card rectangles to ensure they align vertically with the floor. Now add the 'X' sections to take the outer sides, keeping these at right angles to the inner sides, finally adding the outer side pieces. Allow time for it to dry well before adding the diagonals to the top and bottom (bottom locations shown dotted on plan view) also the small tops to the 'X' pieces. This should finish the difficult work. The main points to watch are to keep it all square at each stage, tacking bits in place with tube cement and finishing the joint with Mekpak makes it a bit easier.

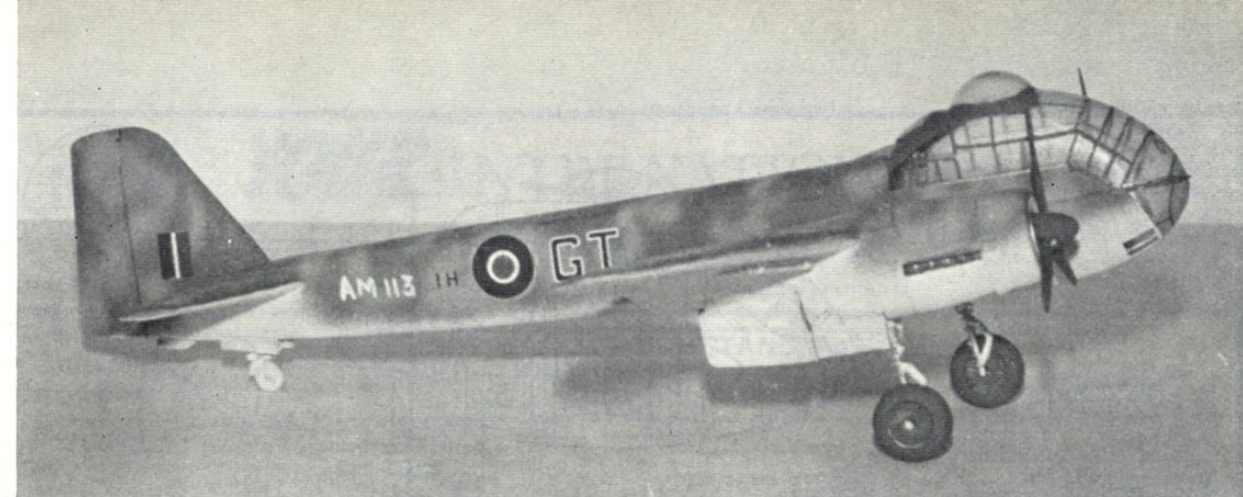
The front 'neck' can now be added, constructed as the sketch, side pieces from 20 thou plastic card, building up the channel sections from Microstrip, mould the corner pieces round a dowel using boiling water as usual (though all vehicles did not appear to have these). To finish the main construction, add the rear door, again constructed as the sketch, make it working if possible, hinging in little drilled brackets or 'Us' of stretched sprue attached to the end of the floor. It's a good idea to touch up some of the unpainted parts now, but first it may be better to add the outer set of hinge brackets for the folding side extensions. That is if you are going to have these as a working feature, or you can just cement them in place either

folded or upright. Important point is to get them all alike, otherwise they will not fold up neatly. The sketch should show how they are made. The top hinge pin is made from stretched sprue, the 'nail' head being formed by holding to the side of a candle flame until the plastic melts and rolls back to form the head. Wheels, by the way, are from a Matador.

Tractor Unit

The tractor unit is a simple OX Bedford, of which the GS version was described by Chris Ellis in *Airfix Magazine* October 1969, so we can crib a few of his ideas for using the Emergency Set. The cab comes from parts 28 to 33 (with the hole in the roof filled) which are assembled as usual, painted inside, and then the bonnet cut off with a razor saw. The seats are added to the floor and all assembled to part 23, which has the outer edges of the mudguards rounded off. The new square bonnet can now be built up from plastic card with the grille from a square of nylon stocking stuck to the front. I used the chassis, part 33, cut off at the rear with part of the cab steps, stowage boxes, etc, cut away and substituting the fuel tanks from the ambulance, part A2. Axles and springs, etc, are also from the Fire Tender, with the trailer attachment turntable built up as shown in the sketch and photographs.

The 'wreck' loaded aboard was made up for me by Neville Franklin from the Airfix Spitfire kit and this rests on the cross member as shown in the photographs. It should really have a 'trestle' support for the tail end and a strap over the nose to complete the scene.



Junkers Ju 188A-2

simple conversion using the
Airfix Ju 88 and an Airmodel kit

by Bryan Philpott

THERE can be few aircraft enthusiasts or modellers, however limited their knowledge of the Luftwaffe may be, who have not heard of the Junkers Ju 88 which, alongside the Stuka, Bf 109, Fw 190 and Dornier 17, is universally accepted as one of the most successful weapons used by the Luftwaffe during the Second World War. The design of the Ju 88 had a vast potential as far as development was concerned, but such was the success and reliability of the various variants of the basic model, that it was some three years before it was found necessary to exploit the potential offered by the basic Ju 88. The planned successor to this aircraft was the Ju 288 but in 1942 it became evident to the RLM that the service debut of the 288 would be considerably delayed beyond the originally anticipated time. The march of progress dictated that a suitable successor to the Ju 88 would be needed before the Ju 288 could fulfill this role so steps were taken to introduce an interim design.

Fortunately the Junkers works had been persisting, on a low priority basis, with the development of the Ju 88E which, through progressive steps, eventually emerged as the Ju 88V-44 (NF + KQ). This aircraft embodied redesigned tail surfaces, which included a larger vertical fin and rudder, increased span with extended wing-tips and ailerons and an extended tailplane. In addition it also had a new crew compartment which included a low-drag power-operated turret. The Ju 88V-44 was re-numbered Ju 188V-1 and as a result of its excellent performance was developed via another prototype, Ju 188V-2, into full-scale production.

The first three aircraft were delivered in February 1943 and by early summer a unit was in existence to carry out service evaluation, this eventually becoming 4/KG66. The first operational Gruppe to use the new bomber was 1/KG6 which began carrying out pathfinder missions in October 1943, and by the end



The completed model finished with RAF markings and AM serial to depict the aircraft captured and shown post-war at Farnborough.

of that year a total of 283 Ju 188s had been delivered to the Luftwaffe.

Many of the basic components of the Ju 188A-2 were the same as those used on the Ju 88A-4 and as it is this variant that is the subject of the Airfix kit, the conversion of it into a Ju 188 is not difficult, especially now that the German firm of Airmodel has issued a kit (No 113) of the new nose, which would have proved the most difficult part of the conversion if it had not been commercially available.

Although the drawings show the prototype Ju 188, the actual model was finished to represent the one evaluated at RAE Farnborough in 1945, hence the markings that it appears in. However, it is not too difficult to find references to the Ju 188, so collectors of Luftwaffe aircraft should find no trouble in locating suitable alternative markings.

Modelling

The first step is to cement together the two halves of the Ju 88 fuselage, not forgetting to include the tailwheel and part 19. When this assembly is thoroughly set, remove the nose portion but be sure to leave in place the leading edges of the wing roots on either side. This operation takes some careful use of the

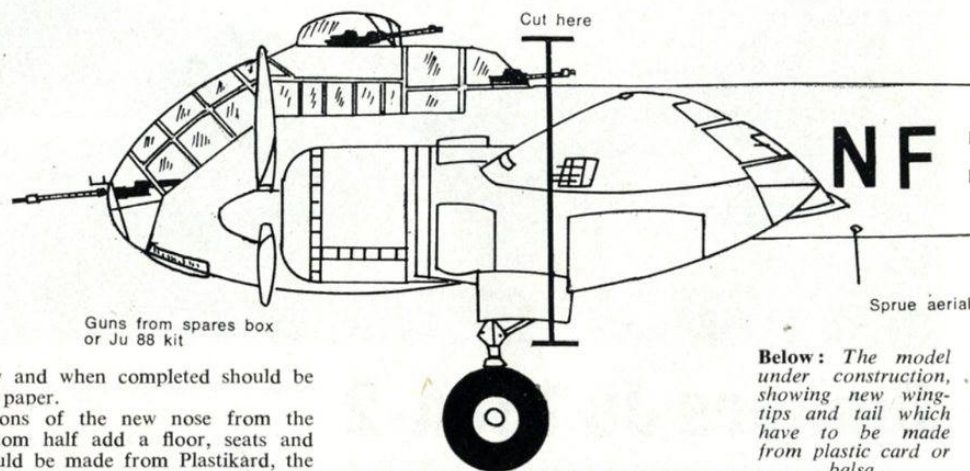
Below: Two more views of the completed model showing extended wingtips. The excellent air-brush finish should be noted.

Continued on next page



Drawing continues other side of advertising section; unstaple centre pages to work from drawing.

New nose Airmodel Conversion 113



modelling knife and razor saw and when completed should be cleaned up with 'wet and dry' paper.

Carefully cut the two sections of the new nose from the Airmodel kit and to the bottom half add a floor, seats and control column. The floor should be made from Plastikard, the seats can be either from the spares box or taken from the Ju 88 kit. Before joining the two sections, add the nose cannon and machine guns as once the two halves are together this will not be possible. The guns in the kit will suffice although if the nose cannon is to be used it is best to build one from sprue. Once satisfied that everything is in place, fix the top and bottom parts of the Airmodel kit together with impact adhesive (polystyrene cement is not suitable) and put the assembly to one side.

Whilst waiting for the new nose to set, remove the fin from the Ju 88 fuselage and make a new fin and rudder from laminations of Plastikard or balsa.

The nose can now be added and at this point you may find it necessary to gently sand down the inside of the wing roots remaining on the fuselage until a perfect fit is achieved. Satisfy yourself that the nose fits correctly and is square to the rest of the fuselage, fix it firmly in place with impact adhesive and, when dry, fill any gaps with body putty or Brummer stopper. Careful use of glass or 'wet and dry' paper is called for when working on the new nose/fuselage joint, as the Airmodel conversion can be easily scratched. When a smooth joint is achieved and all signs of the fuselage joint line and stand slot have been removed, put the complete assembly aside and turn to the new tailplanes.

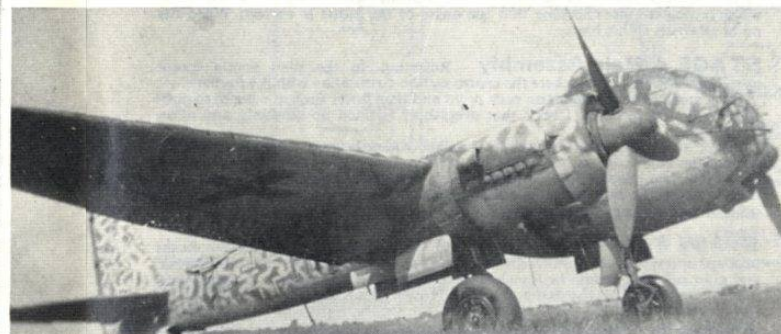
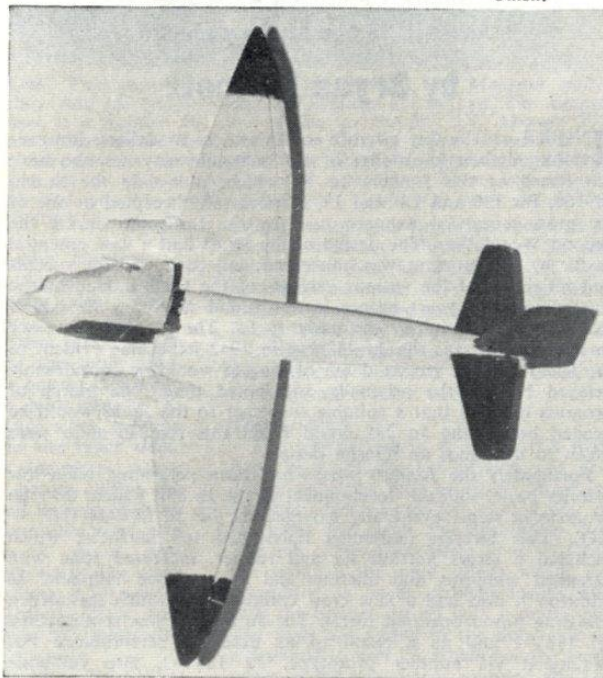
By careful cutting and addition of Plastikard it is in fact possible to retain at least part of the kit tailplanes, but a much better result is obtained if two completely new units are made from balsa or laminated Plastikard with the control surfaces scored in later.

Assembly of the wings is straightforward but cement the ailerons firmly into place. The undercarriage and dive brakes should be added during this operation but for ease of handling, and to avoid damage, leave off the wheels until later. When the wings are dry, cut off the tips just inboard of the outer hinge line on the ailerons and add the new extended tips from balsa. It is possible to get away with this by cutting along the outer aileron hinge, but the thinness of the wing section at this point

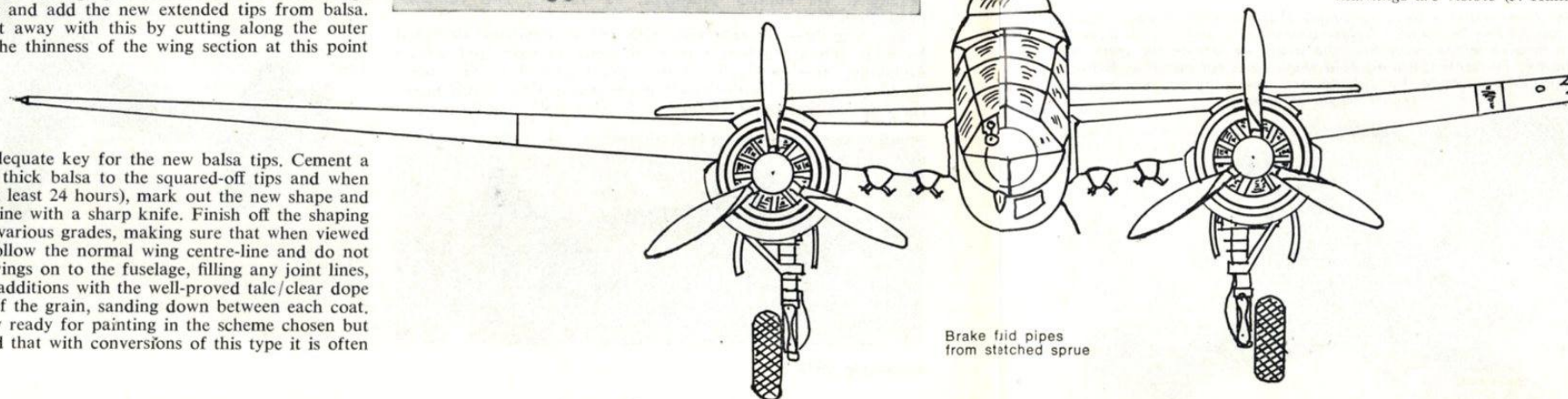
does not give an adequate key for the new balsa tips. Cement a block of 3/32 inch thick balsa to the squared-off tips and when this has set hard (at least 24 hours), mark out the new shape and cut roughly to the line with a sharp knife. Finish off the shaping with glass-paper in various grades, making sure that when viewed head on, the tips follow the normal wing centre-line and do not sag. Assemble the wings on to the fuselage, filling any joint lines, then treat all balsa additions with the well-proved talc/clear dope mixture to get rid of the grain, sanding down between each coat.

The model is now ready for painting in the scheme chosen but the writer has found that with conversions of this type it is often

Below: The model under construction, showing new wing-tips and tail which have to be made from plastic card or balsa.

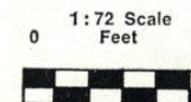


Above: A fine view of a Ju 88A-2 at Hamburg in May 1945. On the fuselage and tail the national insignia are in white outline only, difficult to see above the mottle camouflage. The machine is coded 1H (very small) + H insofar as markings are visible (J. Hamilton).



Ju 88A-2
1:72 scale

Drawings by
Bryan Philpott



Article continues on page 329



Tamiya 1/35th scale Tiger I with German Infantry soldiers. 4 Infantry soldiers make up a set for just 24p. Right: U.S. Army M60 A1 Tank. A beautiful model with quite outstanding detail.



All the pictures on these pages are of Tamiya models—even the figures, demonstrating clearly the standard of modelling that can be achieved with these exceptional plastic kits. Not only do they make exceptional static models, individually and on dioramas, but most of the tanks are motorised to go forwards and backwards, and furthermore, many can be bought in two motor Remote Control versions, whereby the tank can be steered as well as driven backwards and forwards through a hand controller. No other range of plastic kits gives you the same versatility, or is more rewarding to build. Tamiya is the hallmark of quality for the military enthusiast, the ordinary modeller and the part-time plastic kit builder. Today it is the greatest name in plastic kit building the world over.



A delightful diorama scene of a Tamiya 1/35th scale M42 with its crew and other U.S. Army troops relaxing whilst on exercise.

Tamiya's newest release in the 1/35th scale tank range, the PzKw III which can be built in two versions, the Ausf. M and N. The picture on the right shows Ausf. N, which was the last of the many versions of the PzKw III. It was given the extra protection of 5 mm spaced armour round the turret and 8 mm aprons which were hung along the sides of the tank. This is the fundamental difference between the two versions. The kit comes with one crew member and a set of four Germany Army officers in different styles of uniform as shown in the illustration. Price, all complete, £1.85. Available in your Model Shop now.



Below, Crew of a U.S. M4 A3 E8 Sherman examining the remains of a knocked out T34 Russian Tank, both tanks and the figures built and adapted from Tamiya kits, as are the two Leopards to the right. They have been modified by the Constructor as a variation from the normal kit.



Left: 1/35th scale Panther Vs with crews, available separately in the Tamiya range. The picture shows well the degree of detail that can be achieved with good painting. Above: Tamiya's 1/25th scale British Chieftain tank showing well its remarkable detail. This kit, like many other Tamiya kits, is also available in Remote Control form, and is without doubt one of the most popular models in the range.



Tamiya's 1/35th scale Centurion tank, one of his latest models. Exquisitely moulded and with remarkable detail, it will appeal to all modellers and military enthusiasts particularly. British Infantry soldiers are available separately in the Tamiya range in a set of four for 24p. There is an obvious mistake in the picture. Can you spot it?



Above: Capture of a German General by U.S. Troops. The Sherman M8 Armoured Car, Kubelwagen and troops made by Tamiya. Below: Airborne drop of Sheridan tanks covered by Huey Cobra Helicopters. The helicopters are 1/100th scale, the tanks and figures 1/35th scale.



Our centrepiece we submit to be one of the most outstanding pictures we have seen of any models yet. A German tank crew studying maps at the side of a Jagdpanther Rommel, figures and tanks, believe it or not, all in Tamiya 1/35th scale. Tamiya makes a large variety of tanks, military vehicles, soldier figures etc., as well as large scale car kits, motor cycles and aircraft kits in three different scales. Please write for a free list of all their kits. Kindly note that the retail prices shown are suggested selling prices only.



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- BC/4 Hussar Officer
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- BC/9 Lifeguards Trumpeter
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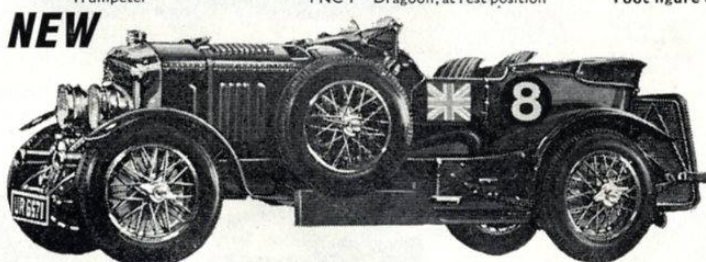
- FI/1 Line Voltigeur of Grenadier Elite
- FI/2 Line Voltigeur Officer with drawn sword (also makes Artillery Officer)
- FI/3 Imperial Guard Grenadier Advancing
- FI/4 Imperial Guard Grenadier Officer with drawn sword
- FI/5 Line Voltigeur Cornet Trumpeter
- FI/6 Imperial Guard Grenadier Drummer
- FI/7 Voltigeur of Grenadier Elite Drummer
- FI/8 Line Fusilier

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- FA/6 Gunner Officer

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- FC/7 Dragon of the Imperial Guard Trumpeter



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- FC/3 Cuirassier
- FC/8 Cuirassier Officer
- FC/9 Cuirassier Trumpeter
- FC/10 Hussar in Shako Trooper
- FC/11 Hussar Officer
- FC/12 Hussar Trumpeter
- FC/13 Hussar Elite in Busby Trooper
- FC/14 Hussar Elite in Busby Trumpeter
- FC/15 Hussar Elite in Busby Officer
- FC/16 Grenadier A Cheval Officer
- FC/17 Grenadier A Cheval Trooper
- FC/18 Grenadier A Cheval Trumpeter
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- BCC Mounted Infantry Officer

BRITISH COLONIAL (BC)

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- BC 2 Infantry, advancing
- BC 3 Infantry, kneeling, firing
- BC 4 Infantry Officer, advancing

AUSTRIAN NAPOLEONIC (AN)

- AN 1 Line Infantry advancing
- AN 3 Line Infantry Drummer
- AN 6 Line Grenadier, charging
- AN 8 Line Grenadier Officer
- AN 10 Tyrolean Jaeger, kneeling, firing

HANOVERIAN NAPOLEONIC (HN)

- HN 1 Hanoverian Volunteer Jaeger, advancing

PRUSSIAN NAPOLEONIC CAVALRY (PNC)

- PNC 1 Dragon, at rest position

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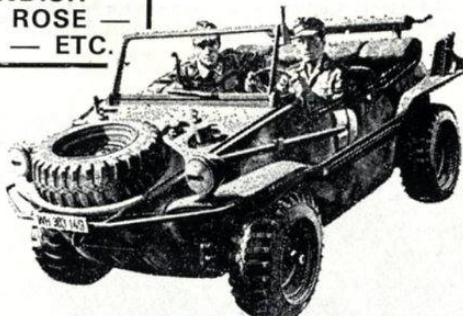
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Modelling the Moth Major

1:72 scale conversion

by Tony Woollett

THE Moth Major first flew in March 1932 and was basically a Gipsy Moth fitted with the new inverted 120 hp Gipsy III engine. It became a familiar sight at most of the private Aero Clubs during the '30s.

A number of single-seat versions for racing were produced but its only success of note was third place in the 1934 Kings Cup race.

This conversion is basically very simple and consists of mating the Airfix Tiger Moth fuselage and undercarriage to components from the Frog Gipsy Moth.

COMPONENTS REQUIRED

Airfix Tiger Moth: Fuselage, undercarriage.
Frog Gipsy Moth: Wings, tailplane, fin, rudder, propellor, struts, wheels.

COLOUR SCHEME

Deltic blue: Fuselage, struts, undercarriage, fuel tank, wheel discs.
Doped Aluminium: Wings, tailplane, fin, rudder.
Registration Letters: Fuselage: White.
Wings: Black.

STAGE 1 The Fuselage The four strut locating holes should be plugged by cementing suitable sized sprue into the holes. While the plugs are drying add details to the two cockpits. This is carried out by fitting a false floor to one fuselage half and adding seats, control columns, rudder bars etc; identical instrument panels are fitted to each cockpit. When you are satisfied with the detailing cement the two fuselage halves together.

Cut the centre section away from the bottom wing of the Airfix Tiger Moth and cement this in to the cut-out in the bottom of the fuselage. Set the fuselage aside to dry for 24 hours. When this time has elapsed the fuselage joint line is rubbed down. The centre section portion should now be carefully filed and sanded to conform to the fuselage shape. The nose cowling complete with propellor shaft can now be stuck in position, but do not attach the propellor at this point.

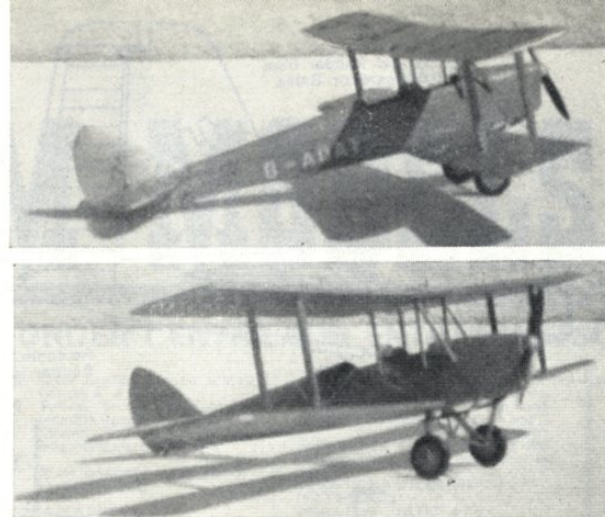
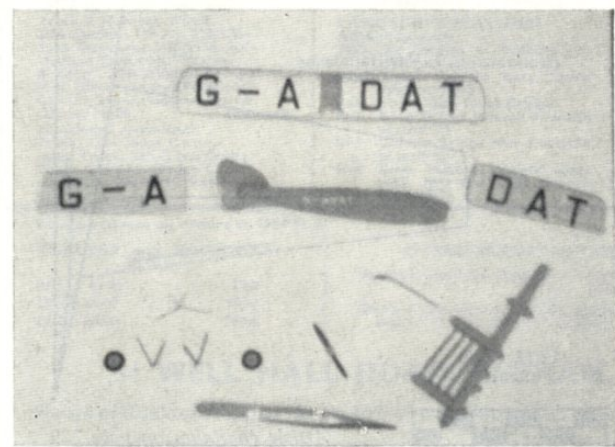
The tailplane fin and rudder are now stuck in position. Do not add the tailplane struts yet, as you will find it easier to paint the fuselage tailplane and then add these afterwards.

Make up from 20 thou plastic card six central horns and position them on the tailplane and rudder.

After allowing time for the cemented parts to set the fuselage is now ready for painting. I found it necessary to give two coats of paint to get an even finish. When dry the tailplane and rudder can be painted, for this I recommend Woolworths heat-proof Aluminium paint to get the best representation of doped aluminium.

The finishing touches around the cockpit area amount to painting the leather padding at the front and rear of each cockpit, cutting and sticking in position the two wind-screens. I suggest using thin acetate sheet as it is easier to fold than clear plasticard. The registration letters can now be added to the fuselage; I used 1/8 inch white Yeoman transfers.

STAGE 2 The Wings Clean away all flash from the wings and stick the ailerons in position on the bottom wing. When this has set, top and bottom wings should be painted aluminium: the fuel tank in the centre section is the same colour as the fuselage, ie Deltic blue.



Above: Take one Airfix Tiger Moth fuselage and mate it with Frog Gipsy Moth wings and tail and you end up with this Moth Major. There is a little more to it than that, however, as is described in this article. These views show the completed model.

When the paint is dry the registration letters can be added. I used two sets from the Gipsy Moth. This gives you two spare 'Gs' and four spare 'Ds', from these you can make the missing two 'Ds' and 'Ts'.

STAGE 3 The Struts The centre section struts in the Gipsy Moth kit I found to be much too thick and clumsy, so using them as patterns, I made my own from plastic rod. These are then stuck in the locating holes beneath the top wing and allowed to set. In the meantime turn your attention to the four main struts: these require sanding down to an aerofoil section and generally smoothing down. When satisfied, these can be stuck in the locating holes beneath the top wing, allow cement to set, checking that the angle of the struts is correct. When dry paint all struts Deltic blue.

STAGE 4 Main Assembly Referring to the plan gently scrape away from the six points where the centre section struts mate with the fuselage.

Put a small spot of cement on each point and then lower the top wing in to position on to the fuselage. Check that everything is lined up correctly and allow cement to set.

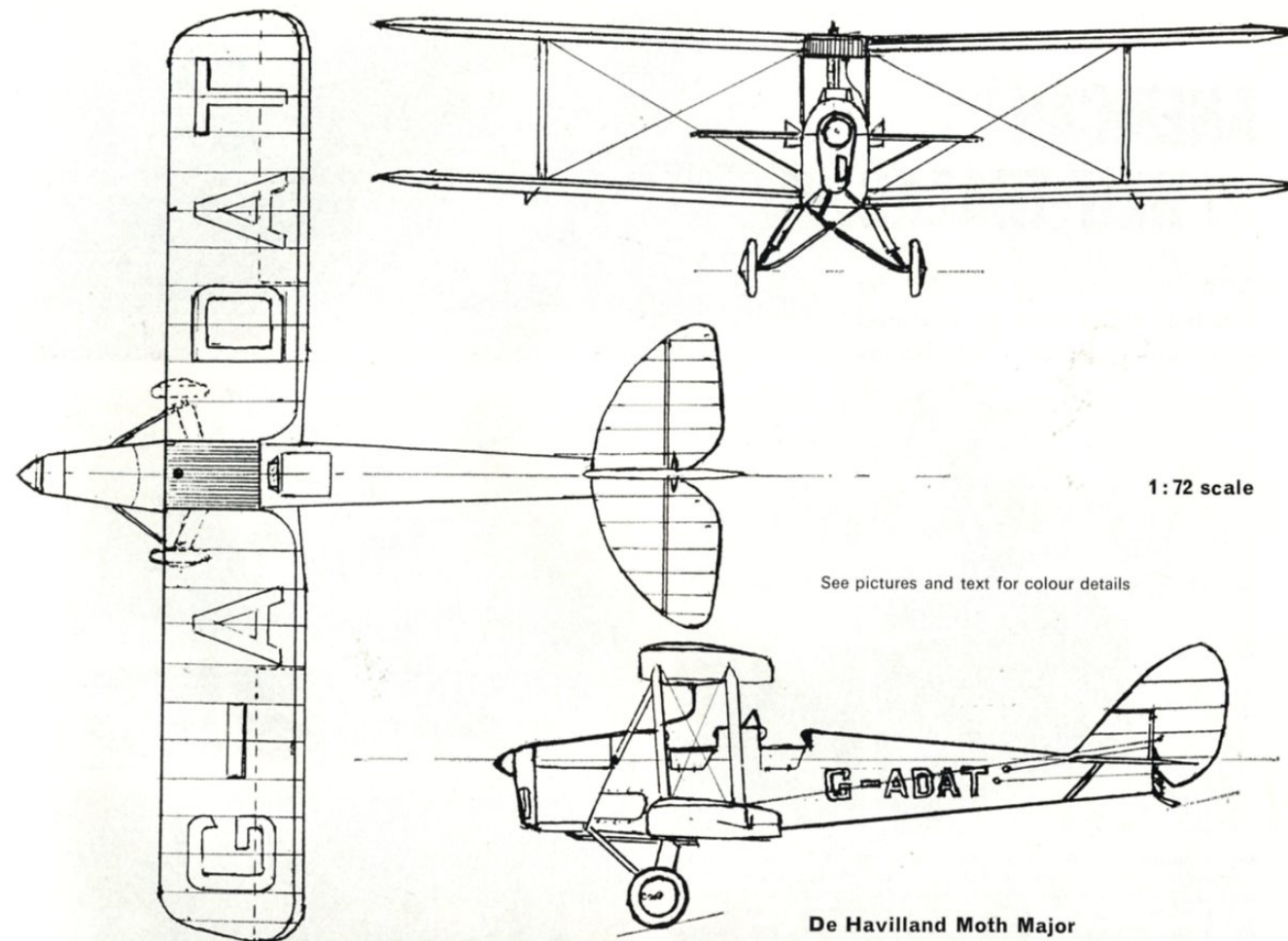
When set scrape paint away from fuselage where bottom wings butt. Lightly cement the inner edge of one of the bottom wings and also add a drop of cement in to each strut locating hole. Carefully mate the wing to the fuselage, at the same time locating the bottoms of the struts in to the holes in the wing. Repeat for other wing and allow cement to set.

STAGE 5 The undercarriage This is now set in to position on the fuselage and when dry painted Deltic blue. The wheel discs are the same colour, and after painting should be attached to the undercarriage. Make up the exhaust pipe from stretched sprue and paint rusty brown. When dry glue in position.

STAGE 6 Rigging There just remains the rigging and this is carried out using the method detailed in the D H. Fox Moth conversion, (Airfix Magazine November issue). When completed the propellor can be stuck in position (NB the spinner is natural metal). Add a control horn and cable to each aileron. Make up and attach the tail-skid. Position in the air inlet opening at the front of the engine cowl the push-rod which is always visible on Gipsy engine aircraft. Add the tailplane struts and paint them Deltic blue.

Finally add the fuel-line which runs from the bottom of the tank above the forward cockpit to the fuselage just to the front of the cockpit on the port side

Left: Conversion work is so simple that the main components of the model can be painted before assembly, a useful trick anyway with biplane wings. Note how the struts are left on the sprue for painting. Tweezers (bottom) hold small parts for painting. **Below:** Markings are made by cutting and re-arranging two sets of Gipsy Moth transfers.



1:72 scale

See pictures and text for colour details

De Havilland Moth Major

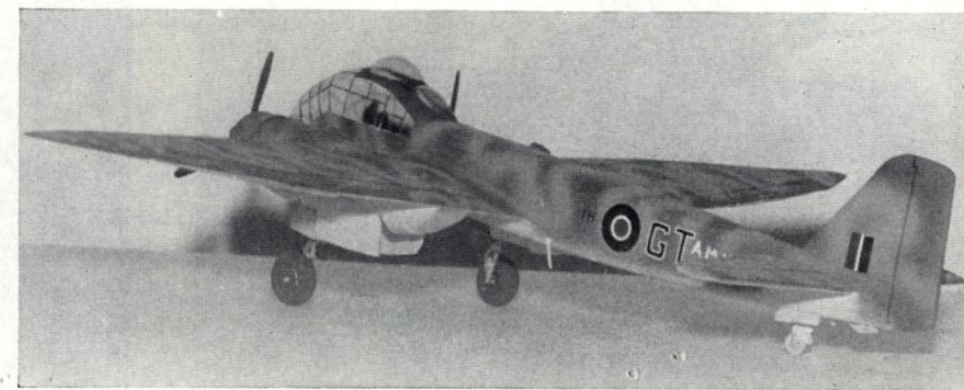
Junkers Ju 188A-2—from page 327

advisable to give the whole model a coat of matt white first. When dry this immediately shows up any bad joints or grain that may have been missed, allowing further attention with glass-paper before the final paint finish is applied.

As previously mentioned, the model shown in the photographs represents the Ju 188A-2 as it appeared at RAE Farnborough in 1945. This was an aircraft used by 111/KG 26 coded IH+GT and had the Werke number 0327 at the top of the fin in white, the RAF serial allotted to this aircraft was VN143 which was crudely marked on the fuselage in white. Roundels and codes

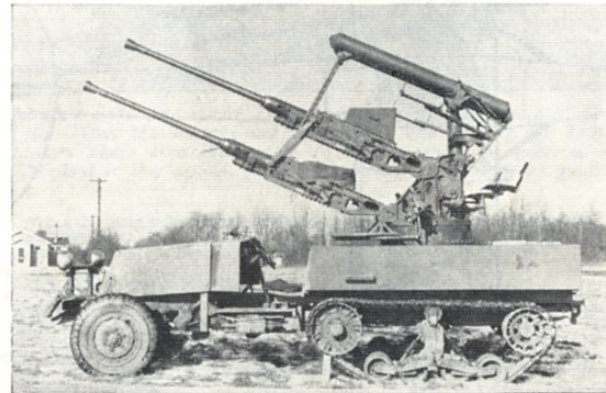
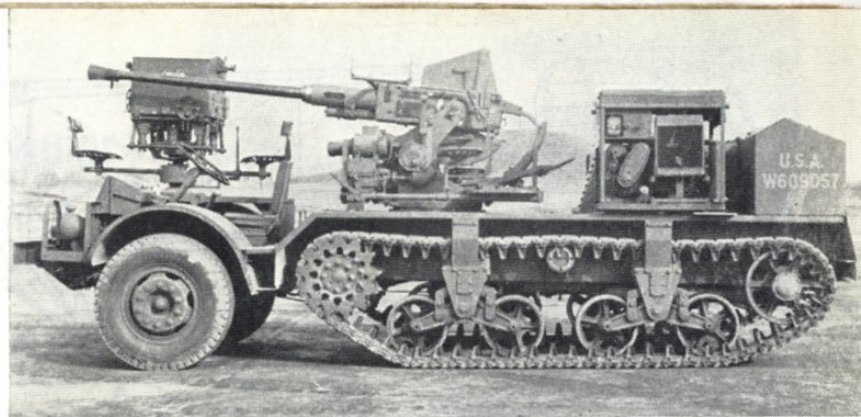
came from the Dri-Dec range, although other manufacturers would be suitable. The RAF serial was painted free-hand with no particular care being taken to ensure that all the signs were of equal size or style. A very good picture of this aircraft appeared in the April 1970 edition of *Aircraft Illustrated*. For those wishing to finish the aircraft as a Luftwaffe machine, photographs can be found in *German Bombers Vol 2* of the Men and Machines series, *Green's Warplanes of the Third Reich*, and the same author's *Bombers and Reconnaissance Aircraft, Vol 10 of Warplanes of the Second World War*.

Right: Another view of the model. On the real aircraft the RAF insignia covered the German crosses. Original German code on this aircraft is still carried, IH (small) + GT, indicating KG 26, same unit as the actual aircraft shown on page 327. The latter machine has individual letter H, however, and a different mottled camouflage pattern.

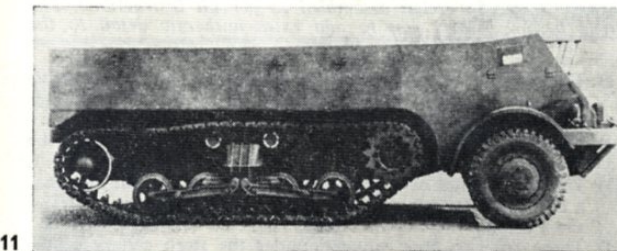
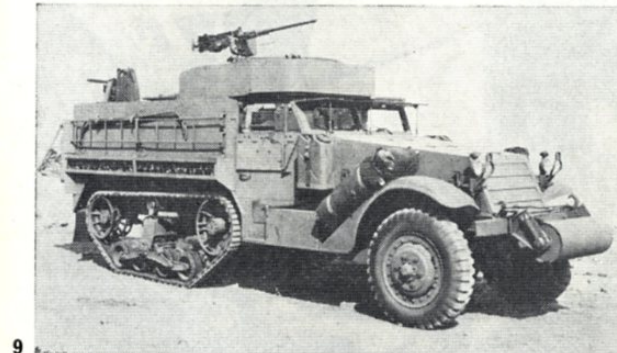
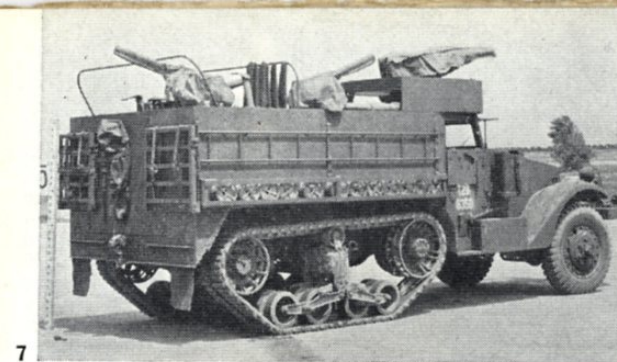
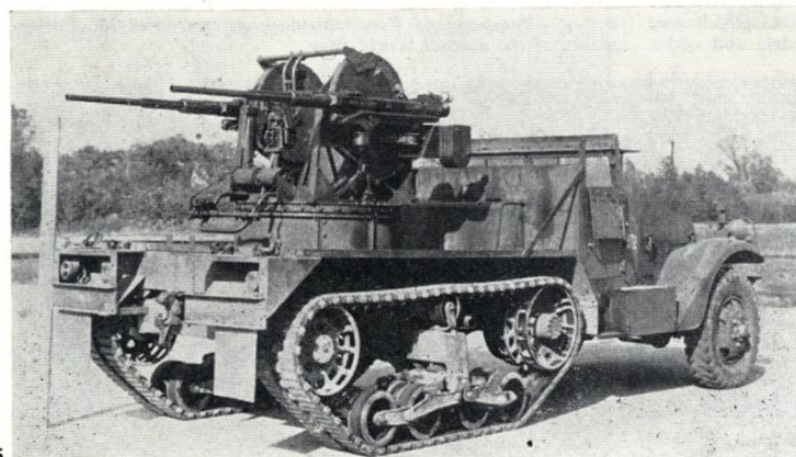


AMERICAN HALF-TRACKS

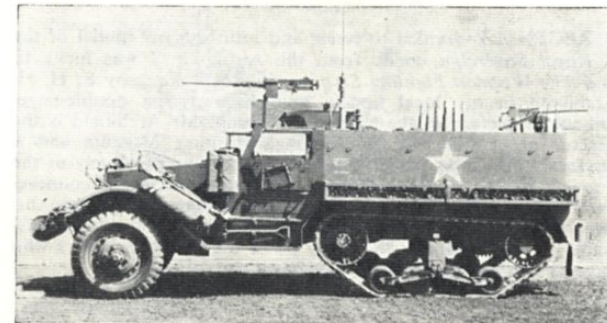
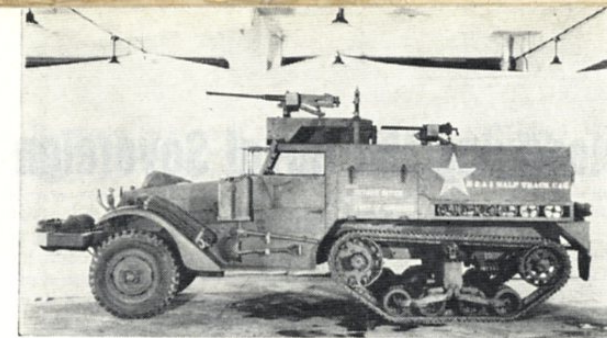
A pictorial supplement to the detailed series which appeared in the June—October 1971 issues



Key to photos: (1) 40 mm Gun Motor Carriage T1, showing Kerrison director and power plant all self-contained on the Mack-built T3 chassis. (2) Multiple Gun Motor Carriage T60 featured a 40 mm M1 gun and twin co-axial .5 calibre machine guns; note outriggers. (3) 40 mm Gun Motor Carriage T68 had two 40 mm guns and overhead equilibrators. Note modified front end to M3 half-track chassis. (4) Half-track M2 of 1941 with .50 calibre heavy machine gun and .30 water-cooled Browning machine gun both on the skate rail mount. (5) Multiple Gun Motor Carriage T10 was a prototype with a Maxson aircraft turret (less its cover) on the M3 half-track chassis. The guns were 20 mm Oerlikons. It was produced in late 1941 but did not enter production. (6) M3 half-track used by the French Army on internal security duties in Indo-China, about 1945. It is a standard vehicle with mesh anti-grenade nets added (ECA photo). (7) Half-track T29 was a prototype developed in early 1943 for 'universal' use to replace the M2 and M3 types. It was standardised in October 1943 as the half-track M3A2. Picture shows full stowage with guns and crews' rifles covered.



Key: (8) Half-track Car M2A1, a winch-fitted version with full stowage and pintle-mounted guns. (9) Half-track M3A2, the production model derived from the T29 shown above it. Note tilt frame stowage on sides. (10) Half-track M5A1 showing flat-section mudguards and rounded rear corners of hull which distinguished these IHC-built vehicles from the M3 models. (11) Half-track Truck T19, a rear-engined prototype built late 1942 by Mack. (12) An IHC M5A1 converted with front jib and built-up superstructure was a standard British recovery and repair vehicle until recently. This vehicle belongs to the REME LAD of 17th/21st Lancers, 1962, and is changing a Centurion tank engine in Aden (Imperial War Museum). (13) An extemporised mine-clearing M3 Half-track with flail equipment, 1943. (14) Typical half-track role, here shown with men and stores of a combat engineer survey section in 1944. Vehicle is a M3; the small swastika on the hull side may possibly represent one 'kill' of an enemy tank by the men of the vehicle.



All pictures US Official except where otherwise credited. We would like to thank Colonel R. J. Icks, USAR, for assistance in compiling these pictures. Colonel Icks also kindly provided the basis for the development summary which appeared in the October 1971 issue.



Modifying the Royal Sovereign

Adding additional detail to the
Airfix kit

by K. J. H. Hill

I RECENTLY decided to re-rig and refurbish my model of the *Royal Sovereign*, made from the Airfix kit. I was lucky to find *The Wooden Fighting Ship in the Royal Navy* by E. H. H. Archibald in my local library and discovered a double-page, full-colour picture of the ship in that book. Mr Archibald is the curator of paintings at the National Maritime Museum and is obviously an expert in his field. I therefore looked closely at the drawing in his book; without going to the extent of counting the rigging lines, I found at least ten differences between his illustration and my model. These I have listed below and illustrated, in the hope that they may be of use to those readers who have or are going to model the *Royal Sovereign*.

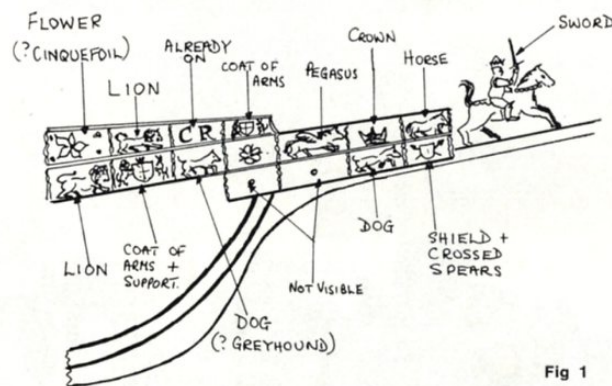


Fig 1

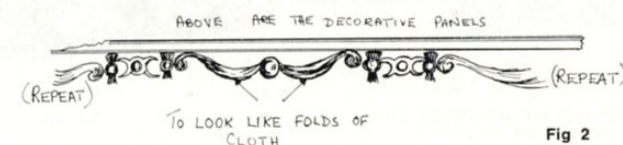


Fig 2

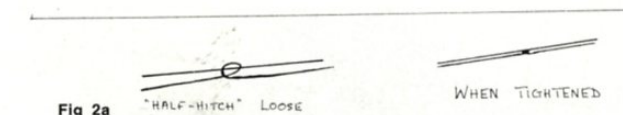


Fig 2a

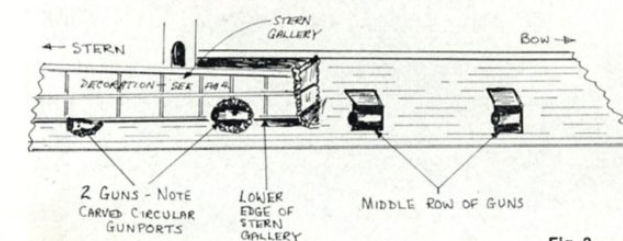
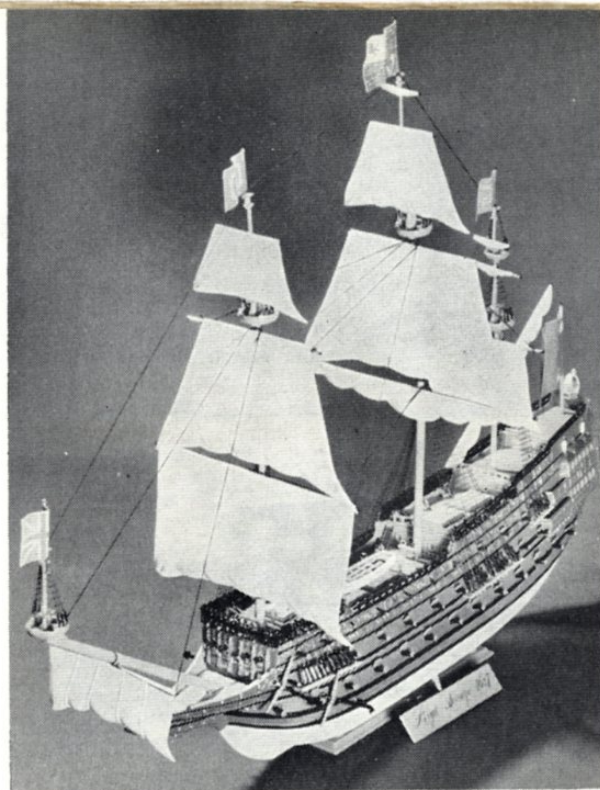


Fig 3



Above: *Royal Sovereign* assembled as per kit instructions. The article below enables you to add extra authentic detail to the model.

- (1) There are three (not two as per model) crows-nests or fighting tops on both the foremast and main mast. The third is placed immediately below the topmost stepped mast.
- (2) The panels on the 'beak' are ALL decorated, unlike the model, which only carries a 'CR' in one panel—see Fig 1.
- (3) The lower edge of the decorated panels along the hull has a repetitive pattern carved upon it (not plain as per model)—see Fig 2.
- (4) There are two guns situated under the stern gallery of the middle row which are missed on the model—see Fig 3.
- (5) Some decoration is missing from the sides of the stern galleries, the taffrail, etc—see Fig 4.
- (6) The central 'cupola' should have a lion on top of crown.
- (7) A large centre panel, four times the size of the existing panels, carrying the royal arms plus supporters is missing.
- (8) There should be an heraldic lion and unicorn (the royal supporters), each complete with shield in front, on the corners of the taffrail—see Fig 4.
- (9) Two sets of guns, called 'murderers' and firing a 2 lb ball arranged to fire across the half-deck and main-deck when the ship was boarded in battle are missing. This mistake is most peculiar, because the bulkheads in the kit have four gun-ports indicated but no guns to fill them, and, according to the instructions, are to be fitted to fire at each other (ie, they face across the main-deck instead of being set on two different decks)—see Fig 5.
- (10) The gratings, which protected the upper decks from flying splinters in battle, across the main, half and fo'c'sle decks are missing. These gratings were removed in 1651, so all you need do is change the date on the identity plate for the kit to be accurate in this respect. This might also make the name right, for when she was launched in 1637 she was called *The Sovereign of the Seas*, not *Royal Sovereign*. This is the biggest mistake of the lot! (See Fig 5 for the gratings.)
- (11) The only companionways or ladders visible on the drawing are shown as in two flights, not a single flight as per model—see Fig 4.
- (12) Finally, the figurehead of a king on horseback should have a sword upraised in his right hand—see Fig 1.

A few points of interest and tips in construction. The sail yard

on the mizzen mast (the smallest mast) is secured to the middle of the poop deck (the deck over the stern). Rigging should be done with different weights of thread; the main supports for masts and yards should be done in heavy duty button thread, secondary ropes, say from yards to masts and decks, should be in strong cotton thread, and the stays, from yard ends to masts, etc, should be in lightweight thread. It is possible to hint at pulleys and blocks by loosely tying one hitch (half of 'two turns and a hitch' if you like) in double ropes in main supporting positions—see Fig 2a.

The main armament of the ship threw shot of between 30 lb and 60 lb, and the guns were arranged, as in most ships of this type, with the heaviest on the bottom deck, getting successively lighter towards the main deck level.

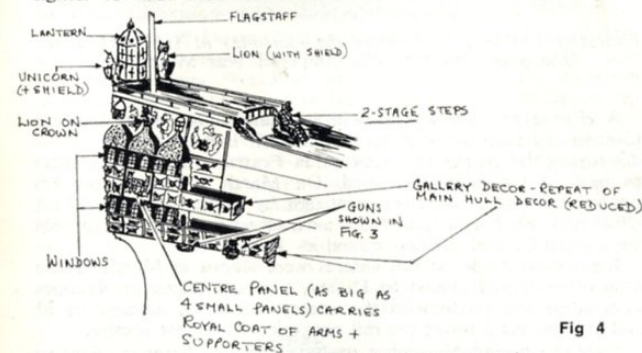


Fig 4

The model looks really well finished if, after completion, the whole ship, complete with stand, is mounted on a piece of wood. A scrap, say, 14 inches long by 6 inches wide by 1/2 inch thick. If you can get a piece with a 'wainey' edge (the crooked edge where the bark came off—usually laying around in any wood yard) so much the better.

I hope these remarks may be of use to potential builders. This kit is superb in its own right, but that little bit of extra work turns it into a beauty.

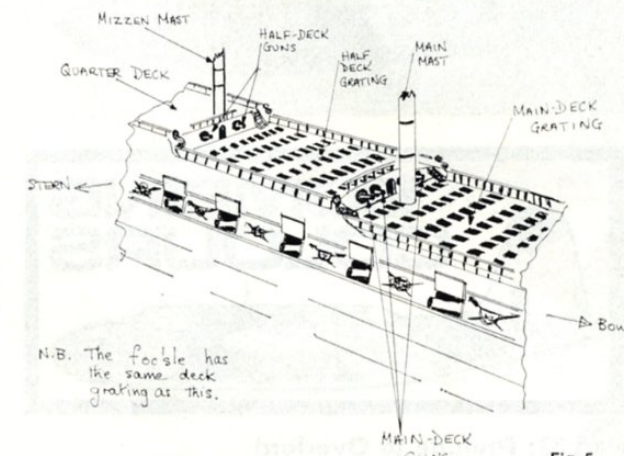


Fig 5

Soldier Conversions in 1:12 scale



Following our article in December on the Scots Greys in 1:12 scale, here are some more ideas for modelling in the same scale sent in by readers. Far left, top: Hussar Officer, 1890. Far left, bottom: 17th Century Grenadier Sergeant. Left: Royal Marine drummer, Guards Drum Major, Private, 51st Highlanders (E. R. Muggeridge). Above, left: Line Infantryman, Waterloo period, Trooper, 17th Lancers (H. E. Johnstone). Above, right: Hussar Officer. Far right: Polish Lancer, both models of the Napoleonic period (G. E. Franklin).

All these models have been made from the Airfix 1:12 series of kits, usually the Life Guard and Coldstream Guardsman kits.



Lancaster I W4113 here wears the markings of 1661 CU. Later she passed to 1661 CU (Imperial War Museum).



Part 33: Prelude to Overlord

THE opening weeks of 1944 found Bomber Command in the thick of the Battle of Berlin, which had commenced on November 18/19, 1943. By March 24/25, 1944, 16 major raids had been carried out on the 'Big City' for the shattering loss of 492 aircraft. What this means in aircraft alone is apparent when you consider that, placed wing tip-to-wing tip, the lost bombers would stretch for 95 miles. During the heaviest raid on the city, carried out on February 15/16, over 800 aircraft dropped 2,642 tons of bombs for the loss of 42 aircraft. By now the Halifax III was fully operational, a state reached in February. Restrictions placed upon the Halifax did not apply to this refined variant.

Losses at this period were frightful, and they reached a climax on March 30/31 when, of 795 aircraft despatched to Nuremberg, 710 claimed to bomb the target and 94 were lost, including HX241, a Halifax III of 78 Squadron, LW429 of 425 Squadron, and LW500 of 640 Squadron.

The final stage of area attacks on industrial cities came on April 24/25, when Munich was the target. Varying marking techniques were in use and on this night the vital part was undertaken by Wing-Cdr Leonard Cheshire who, in Mosquito NS993, flew very low to accurately place his spot fires. His aircraft was hit many times as it had been during his four tours of operations. For continuous courage and example he was awarded a well-deserved Victoria Cross.

In the reckoning, almost 75,000 sorties had been flown by the Command since March 1943. A staggering total of 2,824 aircraft were missing on operations, about 20,000 men had been killed. Up to 1,000 aircraft could now be despatched on one night, as a result of which about 70% of the buildings housing the German aircraft and its ancillary equipment industry had been destroyed or damaged. Ironically this destruction whipped the enemy to fever pitch. With zeal he set to and repaired a considerable amount of the damage, dispersed his industry and was able to step up production. But what he could never do was wrest the offensive from Bomber Command and the USAAF, whose efforts by day did so much to assist the Allied cause even if their bombs were small, their aim good, their courage magnificent and their total effort about half that of the British.

This combined offensive drew from the Occupied Countries men and equipment that could ill be spared from them to face the coming invasion. Never again was the Luftwaffe able to mount an effective offensive, its energy sapped by the overwhelming demand for defence and its morale suffered badly despite the number of enemy bombers it destroyed.

A change of plan was evident in March 1944 when Bomber Command's targets lay closer at hand. It had been switched to destroying the enemy rail network in France and adjacent areas as part of Operation Overlord. On March 6/7, 263 bombers opened this highly effective campaign by raiding Trappes. With Oboe and other radar and radio aids, target marking was usually very accurate and civilian casualties were low.

Eight more raids on rail centres were staged in March. These attacks continued almost to D-Day, a repeat attack on Trappes concluding the phase with the enemy sustaining damage to 33 rail centres. As a result the rail network was almost useless.

Over the period November to June, the day bomber offensive took a very different turn. Throughout the summer of 1943 reports came in of the construction of small concrete sites in many parts of northern France. There was uncertainty about their purpose; was it for launching long-range rockets, for the siting of heavy guns, or could it be that pilotless aircraft would be flown from these bases? Eventually opinion favoured the latter. On November 5, No 2 Group of the US 9th Army Air Force opened a sustained campaign against them which continued whenever the weather was suitable, interrupted the Overlord plans, and ended only at D-Day. At first, three Boston IIIA squadrons and four Mitchell squadrons were used along with A-20s and B-26s, with massive fighter support. In December, by which time sufficient were available, Mosquito VIs of 2 Group began making hazardous low-level attacks, which proved to be the most productive of all against the tiny, heavily defended targets. Before the end of the period, Bostons and Mitchells were neutralising selected airfields, assisting attacks on rail targets and occasionally trying to destroy bridges, notoriously difficult targets. It was during this period that the gradual ascendancy of the fighter-bomber in attacks on tactical targets was so obvious, with Spitfires dive-bombing bridges and rail installations and Typhoons forsaking their 'bomphoon' mantle for the carriage of rocket projectiles. The dividing line between fighter and light bomber was now slender indeed.

By night, too, the fighter-bomber Mosquitoes were active. Since December 1943 they had shown a new face to the enemy, operating as night-fighters and intruders, making attacks on night-fighter airfields and accompanying the bomber streams under the aegis of the new 100 Group. Their aircraft usually had black



Lancaster LM170:2K-X was delivered to 1668 Con Unit in October 1944. It flew as 2K-D and later as shown. It crashed on April 13, 1945. Its front line service was with 44 Sqn from June 1944 as KM-E (C. J. Peacock).

under surfaces whereas those of 2 Group retained their 'day' camouflage which was mostly the same as that applied to Mosquito night-fighters anyway. Some of the latter had Sky spinners, some dark grey in their upper camouflage, although it is wrong to assume that all the intruders had this.

And so the prelude to the greatest seaborne assault in history, the Normandy landing, was over. The operations plan for Overlord was massive. It listed ten heavy gun batteries on the Normandy coast, a part of Hitler's West Wall, which were to come under a tremendous bombardment from much of Bomber Command with Oboe equipped Mosquitoes of Nos 105 and 109 Squadrons marking. Bombs from 1,136 Halifaxes and Lancasters crashed down around the gun emplacements. They did not destroy them, but they stunned the gunners, which was equally effective. At dawn the US 8th AAF continued the treatment.

Meanwhile, off Dover, 16 Lancasters of 617 Squadron (including LM482:W and DV393:F) co-operated with ships and balloons dropping 'Window' in a highly successful diversion operation leading the enemy to think a large force was approaching the Pas de Calais. Stirling IIIs of 218 Squadron flew a similar feint off Boulogne, whilst others of 149 Squadron, including OJ-G:EJ109 and OJ-R:EF161 joined Halifaxes of 138 and 161 (SD) Squadrons in dropping dummy paratroopers near Yvetot. Just before the troops landed, Bostons trailed smoke across the landing craft to screen them, and 2 Group had made night-long intrusions against tactical targets around Caen. These latter operations continued for many nights, Mosquitoes, Gee-equipped, marking moving trains, tanks and motor transport for attack by Bostons and Mitchells. A spectacular attack on the Saumur



PB578 first saw service with 156 Squadron, then passed to the NTU in October 1944. She is seen here as ND-R of 1666 Conversion Unit on a photo taken at Wombledon in May 1945. Other aircraft of the unit were coded QY.

tunnel on June 8 by Lancasters of 617 Squadron, including LM492:Q and DV385:A, was the first occasion on which 12,000 lb 'Tallboy' earthquake bombs were used.

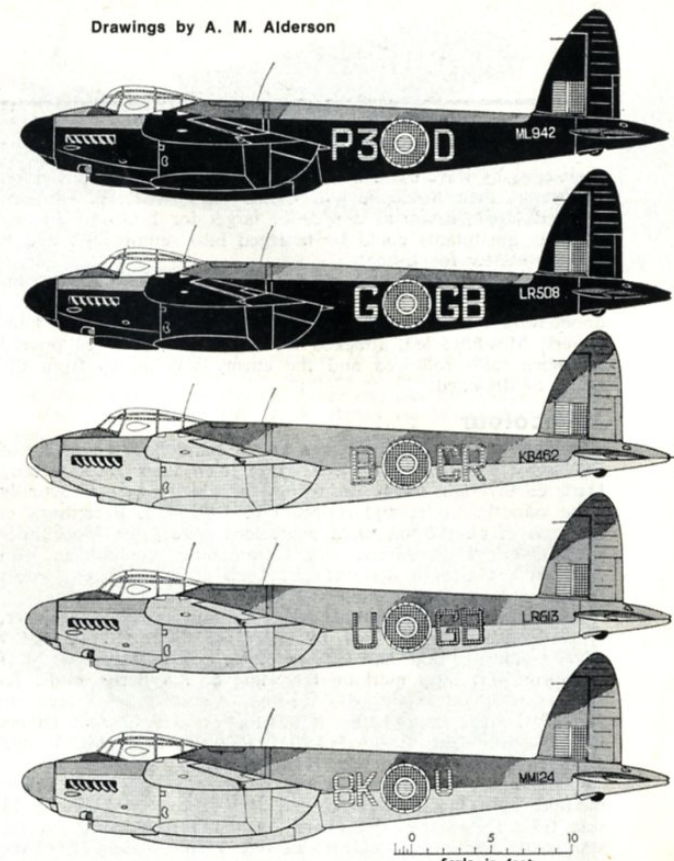
Bomber Command now resumed attacks on Germany, but held itself ready to support the armies if required. British and Canadian forces were held west of Caen and the heavies were then called in, first to smash the enemy at Villers Bocage on June 30. Squadrons of Nos 3 and 4 Groups, led by Mosquitoes and Lancasters of 8 Group, delivered a blistering attack, but it was insufficient to cut a path for the land forces. On July 7, 457 bombers hammered at the German divisions north of Caen, and the Allies were able to enter the city. On July 18, nearly 2,000 Allied bombers delivered a mighty blow on a suburb of Caen. This offensive, Operation Goodwood, allowed a further advance but brought heavy civilian casualties; and still the Germans did not give way. Four more heavy day raids took place before the end of July and two in August before a hole was effectively punched in the enemy lines.

By this time it was clear that the Halifaxes and Lancasters must turn towards a new menace, the flying-bomb offensive. Many sites destroyed had been rebuilt or re-positioned and from June 15 the V-1s were roaring across the Channel and little could be done to halt them. Taking out the sites was an almost impossible task. Instead, the heavies were directed against supply depots and large sites like that at Watten. These day raids, with huge fighter support, continued until early September. By then the Allied armies had overrun much of France and by capturing the V weapon launching areas they brought the menace largely to a close.

Along the French coast the Channel ports held, their garrisons fighting with commendable courage in the face of some murderous

Continued on next page

Drawings by A. M. Alderson



Red	White	Blue	Yellow
Dark green	Ocean grey	Medium grey	Black

Key to drawings (top to bottom):

Mosquito bombers of 8 Group 1944-45. The basic colour of these aircraft was Dark Green and Ocean Grey with either black under surfaces or Medium Sea Grey under surfaces. Codes were Dull Red usually, and their size varied between units from two feet to about two foot six high usually, although 571 Squadron had individual letters smaller than usual. Serials were black, red on the black aircraft.

ML942 was initially delivered to 1409 Met Flight 29.1.44, went to 139 Sqn on 4.2.44 and to 692 Sqn 13.3.44 in whose markings it is seen. It passed to 571 Squadron 19.4.44 and was written off 6.1.45. It was a Mk XVI.

LR508 is depicted as an Oboe equipped aircraft of 105 Sqn and wears the markings portrayed on March 25, 1944. All its nose windows had been overpainted. It served with 109 Sqn from 19.6.43, became GB-F in July and after a battle accident in January 1944 was recorded GB-G. It joined 109 Sqn 6.12.44 and was burnt out during an accident on operations 24/25.4.45. It was a Mk IX.

KB462 was a Mk XXV which arrived at 13 MU Henlow for operational gear on 17.10.44, joined 142 Sqn 14.11.44 and on 17.12.44 passed to 162 Sqn at Bourne where it became CR-B. It was recorded in the markings shown in March 1945. Note the White outline to the codes and the tail warning radar. It joined 142 Sqn 30.4.45 and 627 Sqn on 14.8.45. After the war it was also used by 109 Sqn and was finally struck off charge 22.10.47.

LR513, a Mk IX, served first with 109 Sqn and joined 105 in the autumn of 1944, becoming GB-U (dark blue codes). It was recorded thus in October. On 6.11.44 it returned to 109 Sqn with whom it served until 19.9.45. Nose and nose windows were overpainted.

MM124 was a typical Mk XVI used by 571 Sqn from 25.5.44 until written off 2.1.45.

Bombing Colours—continued

onslaughts by wave upon wave of Halifaxes and Lancasters. First Le Havre, then Boulogne and Calais were shattered. Dunkirk was left alone, useful as a practice target for 2 Group. In any case, its inhabitants could be besieged into submission; and it had no shelter for E-boats.

Bomber Command's support for the armies was almost completed, but it played a major part in the capture of Walcheren dominating the mouth of the Scheldt. On October 3, 247 Lancasters, Mosquito led, attacked the main dyke. The sea poured in, more raids followed and the enemy was driven from the island or drowned.

1944 colour

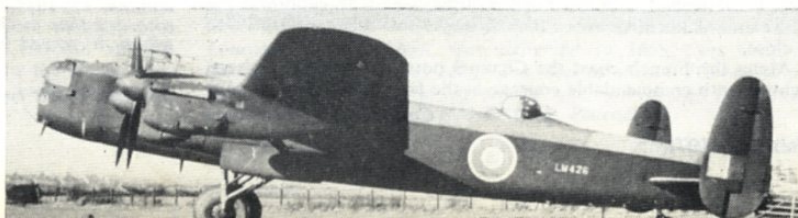
Basically there was no change in the camouflage colouring of the heavy bombers in 1944. They retained their Dark Green/Dark Earth/Night finish, the texture of which was now actually quite smooth. Codes and serials were Dull Red. Exceptions in the case of aircraft on night operations were some Mosquitoes which wore Dark Green and Ocean Grey camouflage with Medium Sea Grey under surfaces. Their codes were red, serials black.

The most important bomber was certainly the Avro Lancaster, typified on January 4, 1944, by OF-W:JB299 and OF-T:JB659 of 97 Squadron. Both had H2S radomes. From Oakington, No 7 Squadron was busy marking for some of the Berlin raids. Its aircraft still had small 'MG' coding, A:JB682 being seen on January 1 a few hours before it was lost on a Berlin raid. Others in use that night included JA911:MG-N, JB414:MG-Y and JB224:MG-W, all fitted with H2S radomes.

Occasionally a Lancaster would be seen bearing some minor modification. One such I recorded at Warboys on February 21 was GT-L:ND454 (GT forward on the port side aft on the starboard). She had a small plastic blister immediately aft of the bomb aimer's window to permit a view aft. Like late production Lancs, she had the customary enlarged bomb aimer's dome, but an aeroplane that did not was LS-C:R5508, now fitted with an H2S radome. Squadron codes were in the customary fore and aft positions. On the only occasion when I saw her, at Mildenhall on April 5, 1944, she was on a dispersal roughly where the large concrete apron now ends and at its north-east corner. With her was LS-L:LL889, the first Lancaster I saw with a small part of the rear of the H2S radome unpainted. Dispersed at the east end of Mildenhall was 622 Squadron whose LL885:GI-J (codes as usual fore and aft) also had part of her radome unpainted. Sitting alongside was GI-Q:LL793, the first Lancaster I noted with paddle bladed propeller blades. She was one of the many Lancasters which had a small 'Window' chute under the port side of



These two photographs show an interesting contrast. Above: LM326:EM-Z (note the narrow strokes in the letters) served with 207 Squadron in 1943 and was lost on October 19. Right: LM426 was used by Rolls-Royce. She had no side windows (Imperial War Museum and Rolls-Royce).



the nose. Some Wellington IIIs and Xs, incidentally, had this modification.

So often today's illustrations of RAF bombers show individualistic nose emblems, but even in 1944 there were a large number of aircraft without any such embellishments. Sometimes squadrons painted aircraft individual letters on the side of the nose in red, in flight colours or yellow. Raids were often denoted by painted bombs, with other shapes for mining or special operations. An exception was ND340:GT-J upon whose nose, on the port side, an artist had painted Jane (of *Daily Mirror* fame) tearing up a swastika.

When the squadrons had a third or 'C' Flight added they sought means of indicating which aircraft belonged to it. 'Squared' letters came first, then the 'bar letter', the line usually being painted above the letter. By 1943 many of the most acceptable code combinations had been allocated, the US 8th and 9th AAFs having letters within the British system. During 1943, letters 'I' and 'C', and numbers up to '9' were introduced into the code system since the number of units in existence was so large. This led to Stirlings of 623 Squadron being coded IC and Lancasters of 582 Squadron wearing 60. Unfortunately no complete list of these codes was apparently kept by officialdom, so that the efforts of a few enthusiasts has been of inestimable value. One of the squadrons that was awarded a second coding was No 514 flying Lancaster IIs from Waterbeach, whose 'C' Flight wore A2 on its aircraft. They included LL678:A2-L, LL697:A2-B and LL698:A2-J, the latter being lost on the Nuremberg raid of March 30/31, 1944.

Division by Flights was important operationally on all RAF squadrons. One Flight could be stood down, or given a particular task, etc. So Flight markings were variously useful. During March 1944 they appear to have been extended to the spinner tips of a number of Lancasters. On OF-R on March 23 they were white. Two days later, OF-G:ND500 had red tips, but all were soon removed.

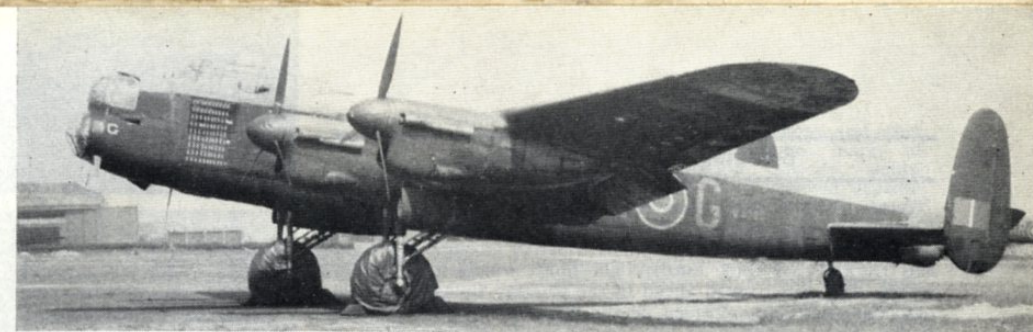
A more unusual sight visible on April 12 at Bourn was that each Lancaster had a metal fairing in place of the nose turret. One thus modified Lancaster was OF-N:ND346. At the same time all of 7 Squadron's aircraft, also part of 8 Group, were similarly modified, like MG-R:JB653.

A typical Lancaster II of the period was JI-U:LL731. When I looked her over on May 21 she had provision for a ventral .50 inch gun but later was flying with the usual two-gun ventral turret which Mk IIs all had provision for, and frequently carried in the case of 3 Group aircraft. Under her nose, which had the earlier small bomb aimer's dome, was the now customary 'Window' chute. Above the mainplane she had black lines indicating safe walking areas. Her bomb bay had accommodation for six incendiary containers and one 8,000 lb bomb, and her bomb bay doors were bulged, again as usual on the Mk II. Beneath her mainplane she had four small bulges over the fuel jettison points. Beneath the rear turret she had a radar aerial to assist in gun laying.

One of the great nights of the period under review was June 5/6, when Lancasters operating against the guns of Normandy included MG-A:JA911 marking Longues, SR-O:LL833 and A2-F:DS786 which, with A2-L:LL678, aimed at Ouistreham. The day raiders against Villers Bocage on June 30 included Lancasters JI-C:LM206 and A2-E:LL677.

The first six months of 1944 saw an extensive re-equipment programme. Four squadrons, Nos 75, 149, 214 and 218, flying Stirlings, were to equip within the year. Halifax IIIs were to join Nos 10 (from March: ZA-M:HX323), 51 (from January: MH-V:HX330), 76 (from May: MP-O:LK780), 78 (from January: EY-V:LK847), 102 (May: KN-A:MZ325), 420 (January: PT-E:LV953), 424 (January: QB-O:LW119), 425 (January: KW-J:LW390), 427 (February: ZL-Z:HX279 lost 19.3.44), 429

Long-serving Lancaster W4783:AR-G of 460 Squadron was at one time fitted with H2S, obliterated from this photograph by the censor. She has her identity letter on the nose and 90 bombs painted along-side (Imperial War Museum).



(March: AL-L:HX352), 431 (April: SE-S:LK828), 434 (May: WL-K:LW173) lost 13.6.44) and 640 (January: C8-Z:LW434 lost 3.6.44). Code positions for some Halifaxes in 1944 included (a) those with unit codes ahead of the roundels—415(6U), 419(VR), 424(QB), 427(AL), 428(NA), 429(AL) and 433(BM); (b) those with unit codes ahead on the port side, aft on the starboard: 420(PT), 425(KW), 431(SE), 432(Q) and 434(WL). Some of the early Mk IIIs soon had under turrets for .50 inch guns fitted, especially on Nos 431 and 434 Squadrons which had previously fitted them on their IIs and Vs.

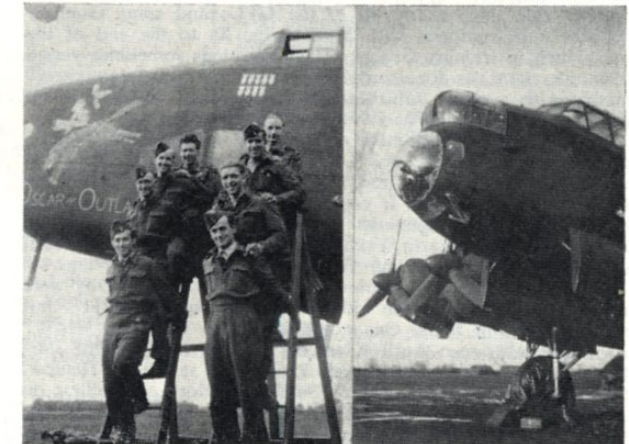
There were many Halifax Mk IIs and Vs flying in 1944, mainly in Conversion Units like OO-F:DK149 of No 1663. The wide assortment of aircraft states was depicted in the previous article of the series. A Mk II series 1a of January 1, 1944, was TL-L:HR847 with rectangular tail, small fairing around the dorsal turret and H2S radome. HX239:HD-G was a Mk III which I looked over on a '60-footer' on February 20. Unit codes were forward on the port side, aft on the starboard. She had the usual rectangular fins and rudders which all the production Mk IIIs had, and small fairings around her dorsal turret. An unusual Mk II series 1a coded BL-H used for trials at Wittering had her nose perspex painted over. Early 1944 Halifax IIIs with elliptical wing tips came into squadron hands, but to the end of the war many were flying with the earlier square wing tips. Such a Mk III in use April 1944 was HX337:W of 466 Squadron. Two in use at this time with elliptical tips were LW633:O of 425 Sqn and LW640:J of 640 Sqn.

During 1944, the number of Mosquitoes in Bomber Command steadily increased. Most famous of the squadrons was No 105 which, by March, was using Mk IVs, Mk IXs without deepened bomb bay and XVI, the latter wearing Ocean Grey-Dark Green-Medium Grey finish. Many of the IVs and IXs had Night under surfaces and red serials. Whereas the later marks had their GB coding aft on both sides of the aircraft, some of the IVs had GB ahead on the starboard side. Examples of the IXs with half black finish recorded on March 25 are GB-W:ML920, GB-L:ML916 with three rows of yellow bombs on the port side of her



Top: Lancaster II 'N', reputedly of 432 Squadron, in a nostalgic view of a dispersed Lancaster. She has a large nose motif but it is barely visible on the original (J. A. Banks via W. H. Lynn). Above: Halifax III N Nan of 432 Squadron awaits her crew from the crew bus, the 'liberty bus' of the war years (J. A. Banks via W. H. Lynn).

Below, left: Halifax III MZ633 'O Oscar' of 432 Squadron at East Moor. Named 'Oscar the Outlaw'; note mission marks. Below, right: The nose of Lancaster II DS830 'S' of 432 Squadron. Small name 'Bobby Boy' appears on nose, probably in red. Note the old type nose cupola. Later this aircraft became EQ-H then went to 1668 CU (J. A. Banks via W. H. Lynn).



nose, GB-E:ML913 and GB-G:LR508. All had two whip aerials above the fuselage.

A month previously at Graveley, 692 Squadron using Mk IV and XVI could be seen to wear 'P3' ahead on the port side, aft on the starboard. A 'black' Mk IV was P3-B:DZ647 and one in 'day' colours was P3-B:ML969 which had a black serial. An unusual machine was ML966 in 'day' colours with a black rectangle along the fuselage carrying the roundels and 'P3-O'.

The first Mk XVI operation was carried out by ML938:GB-D. 105 was a three Flight squadron which had barred letters on 'C' Flight machines like ML987:GB-C (day colours) and ML983:GB-F. The latter, with ML986:GB-G, ML916:GB-P and ML914:GB-N were responsible for part of the marking of the Caen area during Operation Goodwood on July 18. No 109 Squadron at Little Staughton also operated a mixture of 'day' and 'night' Mosquitoes for marking purposes. HS-B:ML907 having black under surfaces like HS-R:LR511, and HS-C:ML989 had 'day' colours. On the night of June 5/6, No 105 Squadron despatched a marker force including GB-G:LR508, H-LR504, J-ML923, F-LR507 and E-ML919.

Marker Mosquitoes were also operated by 5 Group. For the raid on Mailly-le-Camp of May 3, NS993:N and ML976:N of 617 Squadron in 'day' colours, with DZ525:AZ-S and DZ521:AZ-M of 627 Squadron (also in day colours) were part of the marker force.

Stirlings in 1944 use were largely in training units of which more anon. They carried out a lot of mining and gave support to partisan forces. An operational unit flying them almost to the end of the war was No 199 Squadron based at Lakenheath. In April 1944 it was carrying its unit letters ahead of the roundels, like 149 Squadron, EX-P:LK397 and EX-A:LK385 (with a wasp motif on her nose and 24 yellow bombs recording sorties) were both in use on April 5. OJ-O was then LK394. By this time Stirlings were rarely seen to retract their twin tailwheels. To give the aircraft added protection from belly attacks, aircraft of 149 and 218 Squadrons had .50 inch guns in retractable 'dustbin-like' turrets.

Continued on next page

Bombing Colours—continued

A new bomber type introduced at the start of 1944 was the Fortress III. First to have them was 214 Squadron which changed to radio counter measure operations with 100 Group. Its aircraft had Dark Green/Dark Earth/Night finish with red codes and serials. 'BU' was painted ahead of the fuselage roundels and the individual letter aft, repeated on the fin aft of the fin flash and in red. Extra aerals were fitted but no guns in the central or waist positions, and a large H2S radome was placed below the nose. BU-A was HB780, C-KJ111, L-HB779 and S-HB795 called 'Joie des anges'.

The final operations by Wellingtons of Bomber Command came on March 3/4, 1944, when 300 Squadron laid mines off Lorient. But this was far from the end of the Wellington in a bomber rôle since nearly all of the OTUs and some Gunnery Schools were equipped with Mk IIIs or Xs to the end of the war, albeit in training Groups. Their markings sometimes varied from the norm, as for example on a Mk III noted January 29 merely with a white 'O' ahead of its roundels. A Mk Ic seen flying on February 20 had 'V' in similar position and in white.

There were quite a number of trials and experimental Wellingtons in use now. One was LN151 (red serials) with HP-O in white (HP ahead on the port side, aft on starboard) serving the Gunnery Research Unit. If you were lucky you caught a glimpse of one of the Wellington jet test beds, one of which I saw in Dark Green/Dark Earth/Yellow finish on July 21 leaving a trail of black smoke and bearing Type C roundels under its wings.

Occasionally it was possible to glimpse a Whitley. Many were now in the hands of the airborne forces, some at OTUs but mainly rested in MUs. One noted in March 1944 was N1475: ZV-X; another seen April 4 was EB302 with B aft on the starboard side and XR overpainted. There were several at Henlow, for para-dropping trials, where Z9485 sat forlorn and tailless on April 19. Her top camouflage still extended to the base of the fuselage. Nearby was an even more exotic sight, a couple of Hawker Furies in Dark Earth/Dark Green finish with silver undersides.

The light bombers were very active within the period. Boston IIIs and Mitchell IIs in their Dark Green-Dark Grey finish with red codes included Boston RH-F:BZ377 and Mitchell VO-B:FV928. Usually the codes were positioned ahead of the fuselage roundels, with the individual letter on the nose. To make the codes more easily evident on some Mitchells the unit letters were painted aft as on VO-N:FW205. Its aerial in black (as usual) was painted at the base of the fuselage. This was an interesting Mitchell of which there were some more examples. Basically a Mk II, it had a tail position like a Mk III and a large side window in the rear fuselage sides below the turret position, and was thus seen June 11 without the then customary black and white wing and fuselage AEAf stripes as carried on Boston RH-A:BZ210 and VO-F:FW253, a Mitchell II. In the case of 320 Squadron a yellow triangle outlined black and painted on the nose proclaimed their Free Dutch association as on NO-R:FR182 and NO-F:FR189, both with AEAf stripes.

The most unusual of the light bombers I have seen was a Boston IV noted January 4. It wore dark grey upper surfaces and Sky under surfaces. The Mk IV really belonged to a later period.

In addition there were the miscellaneous bombers like the Blenheims, now largely collected at No 12(P) AFU, Grantham, where they wore trainer colours and white letters/numbers. Mk IVs of Nos 526 (eg, T2005) and 527 (eg, T2336) Squadrons had



Top: Halifax III LW687 'Z Zebra' of 432 Squadron at East Moor early 1944 (J. A. Banks via W. H. Lynn). Wellington X OP-L:LN??? of No 11 OTU. Usual finish with red codes and serial above tailplane and no side windows. Possibly it is LN299. (I. E. Young).

red codes and retained their early war Sky under surfaces, and a number of all-black Mk Vs were still around flying from OTUs.

The Bristol Buckingham was at last leaving the Filton lines. These bombers wore an unusual scheme of Dark Green/Dark Earth/Azure undersides. The first one I noted was in June 1944 and soon after I recorded KV321 fully armed and wearing this unusual colouring, more applicable to a transport aircraft, in which rôle later Buckinghams were produced.

Behind the Lines

Always the key to an effective air force is its training programme. In this aspect the Royal Air Force has always excelled. During the war the pattern of pilot training was Initial Training Wing—Elementary Flying Training School—advanced training—Operational Training Unit—Operational Conversion Unit and sometimes, where bomber pilots were concerned, a spell with a specialised training unit for type conversion. Once on the squadron, initiation into current practices followed, then the first sorties were flown, usually again easy targets. These flights were known as 'freshmen'.

Units previous to OTUs were strictly non-bomber outfits. The OTUs equipped with bomber types were introduced in April 1940 and mushroomed tremendously. They varied in strength but usually comprised two or three squadrons each of about 20 aircraft, generally Wellingtons. In addition they often had a further unit of Ansons for navigational training, sometimes some Oxfords for bombing training, and many boasted a further flight of target-towing and fighter aircraft for fighter affiliation duties.

Initial equipment of the OTUs was with the Battle at No 12 Benson and the Polish OTU Bramcote, Whitley at 10 and 19 OTUs, Blenheim at Nos 13 and 17 OTUs which fed crews to 2 Group, Hampdens at Nos 14 and 16 OTUs, whilst the remainder equipped progressively with Wellington I, Ic, III and X. As the war years passed there were structural changes to the system, No 17 OTU, for instance, being switched to the training of Main Force crews on Wellingtons.

Bombers in these units wore standard bomber colours with current code colours, although sometimes the latter varied in colour and presentation from the norm. In early 1944, No 10 OTU was still operating some Whitley Vs from Stanton Harcourt, including BD237:RK-M and Z6952:ZG-R. An Anson with that unit's navigation training flight was AX297:UY-J and it wore training colours and red codes. In the early part of the war such

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A line-up of Mosquitoes of 692 Squadron, all XVIs, including one with black finish at the end of the line. PF392: P3-R nearest served from August 28, 1944, and went missing on March 21/22, 1945 (Imperial War Museum).

BOOKS for modellers

Unless otherwise stated, books reviewed are normally available from your local bookshop or from hobby shops which sell books for enthusiasts, including the mail order stockists advertising in this magazine. As a last resort they can be obtained from the publishers whose addresses are given when known. In all cases of mail order, however, suitable postage should be added to the selling prices quoted.

AVIATION

Battle of Britain.

Bruce Robertson.

J. W. Caler Publications, 7506 Clybourn Avenue, Sun Valley, Calif, USA.

£1.90 (postage included).

The Yoxford Boys.

Merle C. Olmsted.

Aero Publishers Inc, Fallbrook, Calif, USA.

£1.90 (postage included).

Both distributed outside USA by W. E. Hersant Ltd, 228 Archway Road, London N6. UK prices given include postage from Hersant.

THESE are both large format soft cover books, the first being almost wholly pictorial, with a summary of events and commentary by Bruce Robertson. To British eyes many of the pictures will be familiar, though some from the German side were new to us, as were some showing Italian participation in Axis operations. Two large colour plates (of a Spitfire and Me 109E) are supplied with the book which also has colour covers and colour centrespread. While the book reveals little new to British readers, it is nonetheless a good illustrated treatment of its subject. The second book is a lengthy operational history of the USAAF 357th Fighter Group which flew from Yoxford in Britain for much of its war service. P-39s and P-51s equipped the group (the former only for initial training) and there are dozens of rare pictures from squadron archives. Missions, commanding officers, aces, and so on, are all recorded in detail. There are some tone drawings showing representative colour and marking schemes for the group's P-51s. This is a very fine book.

Hawker Hurricane Mk I-IV.

Czechoslovakian Air Force, 1918-1970.

Osprey Publications Ltd, 707 Oxford Road, Reading, Berks.

£1.25 each.

TWO new titles in the Aircam series both follow the usual format. The book on the Hurricane doesn't break much new ground, most pictures being familiar from earlier publications on this aircraft. However, it does collect a good selection in a convenient format and is useful to anyone modelling Hurricanes. The Czech Air Force book (an Aircam 'Special') offers material new to most readers, we would imagine, and makes interesting browsing. There are plenty of colour scheme ideas for a number of well-known aircraft types (eg, Mosquito,

Spitfire, MiG-15, Stormovik, etc) which appear in kit form.

Flying Navy.

Richard E. Gardner.

Almark Publishing Co Ltd, 270 Burlington Road, New Malden, Surrey.

£1.25 (paperback); £1.75 (hardback).

OUT of the usual run of Almarks books, this volume records mainly the carriers, aircraft, squadrons, and happenings in the past five years of the Fleet Air Arm, with special reference to the recent run down and the planned phasing out of carriers. The author also tries to see future developments for British naval aviation. All aircraft types are well illustrated in this book, and there are many specially taken pictures, including nine in colour. Naval aircraft fans will find much to interest them here.

Aircraft Profiles: 226 F-105 Thunderchief, 228 Fieseler Storch, 230 Dassault Mirage, 231 Lublin R.XIII, 232 Martin Maryland and Baltimore.

Profile Publications Ltd, Coburg House, Sheet Street, Windsor, Berks.

35p each.

THIS latest batch of Profiles (actually released singly in recent months) covers a good selection of types. We were much impressed by the Storch, Maryland/Baltimore, and Lublin R.XIII titles, though all are up to the usual Profile standards. We imagine that virtually everything in the Lublin book will be new to the average reader since this obscure, but interesting, Polish type is little known. There are some fine pictures and a good selection of colour schemes. The other titles also offer some good colour scheme details and excellent pictures. These should all be of interest to aircraft modellers since kits are produced for all types covered except the Maryland.

Armament of British Aircraft, 1909-1939.

H. F. King.

Putnam & Co Ltd, 9 Bow Street, London WC2.

£5.50.

THIS fine new volume in the Putnam Aeronautical Library series supplements to some extent the other titles from the same publisher which cover the output of aircraft makers or the aircraft used by various air services. *Armament of British Aircraft* takes each manufacturer in Britain in the 30 years up to 1939 and records every aircraft type turned out which carried armament of any sort. Over 500 types are covered and there are over 400 pictures and line illustrations. The contents are alphabetical and the text

relates only to the guns, bombs, and other ordnance loads. Mountings, marks of weapon, ammunition capacity, sights, and related aspects are covered depending on their importance and how much information is available. Some aircraft types, of course, are so obscure that little is known about them. Hence one or two entries are restricted to about three lines, others get a lengthy paragraph, while major types are extensively covered; the Spitfire, for instance, gets nearly five pages of text and photographs. The photographs are mainly restricted to detail views as are the drawings—in other words, the sort of illustration not found in aviation books of a more 'general' nature. This makes the new volume particularly useful for aircraft modellers who often seek the sort of detailed information given here. For instance, if you need really close views of the armament of a Turret-Demon you'll find excellent pictures in this book, to mention just one specific example. Modellers of RAF aircraft up to the 1940 period should certainly not omit this book from their reference sources.

Beyond the Tumbult.

Barry Winchester.

Allison & Busby, 6a Noel Street, London W1.

£2.80.

BOOKS about prison-camp escapes in World War 2 are plentiful. This new book covers an allied subject which will be new to most readers—prison-camp escapes in World War 1. In particular it deals with the exploits of three RFC pilots, Blain, Kennard, and Gray, who made a masterly escape from Holzminden prison-camp in the closing months of the war; this was, incidentally, part of a 'mass' escape of 29 men by a classic piece of tunnelling. In addition to the final major escape, the book also recounts earlier escape attempts by the three men, and features the exploits of several other prisoners as well. This is an exceptionally well produced book with many fascinating pictures and an excellent and gripping text which makes absorbing reading, and captures the flavour of the period.

MARITIME

The Tribals.

Martin H. Brice.

Ian Allan Ltd, Terminal House, Shepperton, Surrey.

£3.80.

Tribal Class Destroyers.

Peter Hodges.

Almark Publishing Co Ltd, 270 Burlington Road, New Malden, Surrey.

£1.25 (paperback); £1.85 (hardback).

THOUGH these two books set out to cover the same subject they actually prove to be entirely complementary. *The Tribals* is virtually a record, in alphabetical order, of the active service careers of each ship in the 'Tribal' class, with considerable detail of individual actions. The badges, lists of commanding officers, and numerous pictures, many from private sources, support the extensive text. *Tribal Class Destroyers*, on the other hand, concerns itself with a detailed description of the development of the design.

Continued on page 346

NEW KITS AND MODELS

Imperial Modelling: camouflage net

IMPERIAL Modelling, 7 St John Street, Lichfield, Staffs, have produced a miniature camouflage netting scaled to match 54 mm soldiers and 1:32 or 1:35 scale model military vehicles. In drab green material it comes in sheets measuring 12 inches x 36 inches complete with plastic rod for use as supports. The texture of the material is good and the appearance, either rolled or opened out, is most realistic. Per sheet the material is priced at 15p, plus 2p for postage. C.O.E.

Tamiya: 1:72 scale Vosper Patrol Boat

THE Tamiya *Perkasa* is a truly magnificent kit 15 inches long and containing 200 plus parts. As is usual with Tamiya models, the kit can be motorised if desired. The mouldings are flash free and the components need little or no trimming before assembly. The instruction booklet is self-explanatory with plenty of diagrams and photographs of the real craft, which are a great help in assembling the model: in fact they help you to get the 'feel' of the actual patrol boat. A history of the development of the 'Perkasa' class is given in the instruction booklet and although in tortured English it puts over the main idea. Tamiya have moulded the parts in the correct colours to reduce painting requirements to a minimum. Of particular note is the hull where the dark red underside colour is already provided, neatly applied. This obviates the trickiest of all tasks in a ship model, painting the waterline colour division. Naturally, it is still necessary to paint the many small detail parts supplied.

Perkasa is actually a 'stock' Vosper-Thornycroft fast patrol boat design around a Proteus gas-turbine power plant. Some quite similar vessels have been sold to several navies. In one respect the kit artwork and instructions could mislead the novice as they illustrate *Perkasa* with a Royal Navy crew and White Ensign, whereas the actual vessel belongs to the Malaysian Navy. This does not detract from the overall excellence of the kit, a real collector's piece even for those who might not normally consider warship modelling. We hope Tamiya will come up with more small warship kits in this scale. The *Perkasa* kit costs £4.50. D.L.

Aurora: 1:600 scale 'Moskva'

AMONG latest plastic kits for review is the Canadian-moulded Aurora model of the Soviet helicopter ship *Moskva* (Moscow). This Russian Navy showpiece is very much the up-to-date cruiser, designed for long-range surveillance and conveyance of assault troops such as the 'Black Beret' forces.

She carries a complement of Kamov KA-25K helicopters which can be stored below deck or in the hangar under the

superstructure. The landing pads are equipped with anti-slip rope nets. Her very sophisticated armament suggests she could give a good account of herself if necessary.

The hull differs from the conventional ship in having the maximum beam well aft to provide a good operational area.

The model is to 1:600 scale with an overall length of 13 inches and beam of 2½ inches. The 60 pieces in the kit cover most of the visible items on the prototype, well moulded in grey plastic and only a little trimming is needed. With our sample some pressure was required to establish a good joint with the two parts of the hull but this may have been a mould fault peculiar to our sample. The flat bottom and width make it easier to motorise a boat in this scale if desired, although, of course, the four propellers of the original could not be fitted.

The instruction sheet in English and French is self-explanatory and colouring details are included with each stage to make assembly easier. As with all naval vessels in this size, careful painting improved the appearance considerably. Jones Bros of Chiswick supplied the kit and at a price of 79p it makes a worthwhile addition to one's fleet. It matches the Airfix warships in scale. B.L.

Recent Catalogues

JONES Bros, 56 Turnham Green Terrace, London W4, have supplied us in recent months with a number of new catalogues of interest to modellers. First comes their own catalogue, a compilation of all available plastic kit ranges stocked by Jones Bros. This means that virtually every kit presently on sale in Britain is listed. Scales are given in most cases, and some manufacturers' lists are used in the compilation. Price is 17p plus 5p postage. Next comes a fine colour catalogue from Vollmer, nicely produced and listing and illustrating, in sharp pictures, every Vollmer model. These are all railway and scenic items. Some pieces, like working street lamps, fences, oil tanks, working conveyors, and bridges, have many non-railway uses. Scale for all Vollmer models is 1:87 (HO) but most items are also suitable for 1:76 (OO). The catalogue costs 17p plus 3p postage. In similar style is a very thick Pola catalogue, again colour printed on nearly every page. This illustrates all Pola HO and N scale buildings, structures, scenic items, and figures, plus the Pola-Maxi range of O gauge model railways. Price is 17p plus 5p postage. Lastly, there is a fine Historex catalogue, English edition, which not only illustrates every model, but is also packed with colouring notes, modelling hints, and pictures of models and conversions. This is a fine production (by Historex Agents, not the parent company) and is a 'must' for anyone who collects Historex figures, or, indeed, for anyone interested in Napo-

leonic period uniforms. Price is 35p plus 5p postage from either Jones Bros or from Historex Agents, 3 Castle Street, Dover, Kent. C.O.E.

Tambour: uniform prints

TAMBOUR Productions, 32 Ongar Road, London SW6, are producing a very handsome series of colour prints devoted to the uniforms of the French First Empire regiments. Sheet 1 covers Grenadiers of the Imperial Guard and Sheet 2 the 2nd (Dutch) Grenadiers. A whole range of extra sheets is planned, intended eventually to cover the complete French Army. The sheets are actually in large size 'folder' format. The left-hand half shows tunic and coatee detail for each rank of the regiment concerned, while the right-hand sheet shows head wear and arms and accoutrements. Explanatory captions complete each folder. All illustrations are in colour. Price per sheet is very reasonable at 50p post paid. Major model soldier stockists should also have Tambour prints. The nature of the sheets is such that they could be filed in any normal filing system. Tambour can also supply individual hand-coloured single figure prints on 20 inch x 14 inch sheets at £1.15 each, signed by the artist. Each print comes with explanatory text and the figure is about 12 inches high and sharply detailed. The prints can also be had in black and white only at 35p each. The first print available in this series is a Marine of the Imperial Guard, 1810. C.O.E.

Goodinge and Wilson: colour cards

A MOST attractive set of 12 postcards, depicting both sides in the Civil War has recently been published by Goodinge and Wilson. Originally drawn in a very distinctive style by Peter Heath, the pictures have been accurately reproduced in clear, sharp colour on good quality glossy card. The set consists of six uniforms each of the Royalist and Parliamentary forces, covering officers, cavalry, infantry, and drummers. Detail is extremely clear, and the artist has captured the authentic appearance of the period. Students of uniform and modellers alike will find these drawings of great interest, and at 5p per card, or 60p the set, they represent very good value, being obtainable from Goodinge and Wilson, 33 Dallington Street, London EC1. R.S.D.

Italaerei: 1:72 scale Ca 313

ONE of the best European manufacturers, Italaerei, has been producing a series of last war Italian military aircraft over the last three years, and seems to turn out about two or three models every twelve months. Fortunately they do not repeat aircraft already in production as kits by others in the trade.

By British standards their products are Continued on page 342

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NOTE. All Modeldecals sheets contain full markings to complete all models listed except sheets Nos. 1, 2, 7, 11, 12 and the Vampire section of 14, where the 'D' type roundels are used from the respective kits, as also is the Nat. Insignia for the F-102. However, the Hunter section only on No. 7 does include roundels. Harrier markings on No. 7 are intended to complement those in the Frog kit. Instrument panels included for all machines on sheets Nos. 7, 9, 10, 11, 12, 13, 14 except the C-47N.

'MODELDECAL' style fully illustrated instruction sheet giving decal locations and full colour scheme details, is included with all Modeldecals.

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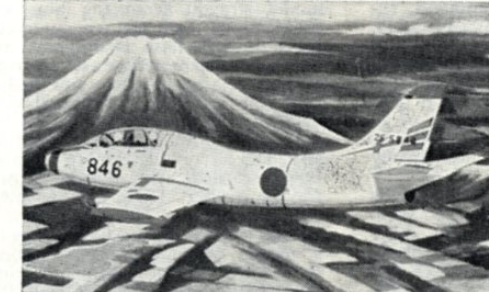
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New Kits—continued

expensive but this is mainly due to heavy import taxes. The latest, for example, is of a Caproni Ca 313 bomber and reconnaissance aircraft, and costs £185. However, the price is well worth it as the kit, like its predecessors, is worthy of the highest praise.

Moulded in mid-grey plastic, this model has some of the finest surface detail yet seen. Every part, including some complicated sections round the large glazed areas in the nose, fits perfectly; the engine nacelles which come in two parts also fit snugly into their places on the wings. Likewise the undercarriage which has moulded sections over the front, fits snugly into the recesses and if the modeller wants the undercarriage retracted the parts again fit well.

Transfers are provided for either a Swedish, Reggia Aeronautica or French air force aircraft and there are alternative parts to make the stepped cockpit of the Ca 314C or the larger glazed nose of the basic Ca 313 machine. The model's transparencies are excellent and the fastidious modeller will need to detail the cockpit interior because this shows through the clear plastic easily. A certain amount of detail is given with the kit in this area but more is needed to make a perfect replica.

Although several of the leading model shops now stock Italaerei kits, the main UK importer is Modeltoys of 246 Kingston Road, Portsmouth, and examples can be obtained by post. *A.W.H.*

Modeldecals: transfer sheets

THE two recently released sheets of decals from Modeldecals provide a number of very useful sets of markings for RCAF Sabres, the latest in Harrier markings, RAF Phantoms, an F-102 and Tactical Air Command badges.

Both of these sets (Nos 11 and 12 in the range) are superbly printed and are obviously from top rate artwork in the first instance. The accuracy of colour and the completeness of each set is worthy of the highest praise.

Detail sheet No 11 has the F-102 Delta Dagger markings for an aircraft of the 460th FIS, Air Defense Command, together with those for two Harriers GR1s. These come from either No 4 or No 20 Squadrons and are designed in such a way that they can be used in part for either the present matt camouflage and modified 'B' type roundel scheme or in conjunction with the Frog/Hasegawa kit. Aircraft serials XV789 or alternatively XV786 are provided.

Perhaps the most versatile part of this sheet is the RCAF Canadair Sabre Mk 6 markings. Full unit badges and other identification markings are given for an aircraft of No 430 Squadron RCAF but an additional four unit emblems are provided so that the modeller can make up any of these versions using in addition the markings for RCAF aircraft supplied by Stoppel or Dri-Dec.

Sheet No 12 provides markings for a No 17 Squadron Phantom FGR2, a Lockheed F-104G of the 10th Fighter Bomber Wing, Belgian Air Force, and 20 Tactical Air Command badges scaled down to 1:72 from the 18 inch variety

used on many USAF aircraft belonging to that Command. The badges are intended to go with the earlier Modeldecals sheet No 8 which contains USAF tail codes, serials and other markings so that models previously made can be brought up to date by their addition.

Both sheets are exceptional value at 38p each plus 5p for postage. Modeldecals can only be obtained in the UK from Modeltoys, 246 Kingston Road, Portsmouth. *A.W.H.*

Tamiya: 1:100 scale Buccaneer S2

TAMIYA have, as usual, produced a superb kit with three alternative sets of markings for Navy, RAF and South African versions of the Buccaneer. Working features include the revolving bomb bay, so noticeable on the real aircraft. We note on the transfer sheet that the



'Royal Navy' lettering is white, and not, as it should be, light blue. The manufacturer has apparently tried to rectify this by adding an extra lettering sheet, but it is not really satisfactory. Apart from this small detail the Buccaneer will make a welcome addition to any aircraft model collection. Distributed by Riko, 13-15A High Street, Hemel Hempstead, Herts, the kit is available from any large model shop at a price of 55p. *D.L.*

KP: 1:72 scale 11-10 Avia B-33

THE Czech firm of Kovozavody Prostejov has produced yet another excellent 1:72 scale kit in its small series of Czech aircraft types which already includes the L-29 and Avia B-534. This new model is the Avia B-33, the Czech-built version of the Il-10 which was virtually identical externally. This builds into a fine, well-detailed and accurate replica, a 'must' for any collection. We made the model straight from the box with no problems of any sort encountered. The parts fit well, flash is minimal, and the assembly diagrams are easy to follow. Surface detail is excellent and finely done. Even the insides of the wheel wells are detailed, which is quite unusual in 1:72 scale. The finished model is most impressive. The aircrew figures are poor and are best discarded, while no seat is provided for the gunner. These are the only criticisms, however. The instruction sheet, though written in the Czech language, is a model of what an instruction sheet should be. Colour scheme drawings are given for three finishes, a Czech, Russian, or North Korean machine. Transfers are provided for all three. These are adequate but glossy and need matting and trimming. This kit cannot be purchased outside the main Communist states, of course, but anyone with a Czech or Polish pen-friend could obtain one on an exchange basis. Reader K. B. Cothliff, 77 Rivington Drive, Burscough, Lancs, obtained a review sample for us and can

obtain very limited supplies via his own Czech pen-friend. Write to him (with SAE) for details of availability as only a few kits can come from this source. We'd like to thank Mr Cothliff for his help. *C.O.E.*

Otaki: 1:44 scale C-5 Galaxy

THE immense Galaxy is a giant of a model even in 1:144 scale—over 22 inches long in fact. The kit box is longer than (or at least as long as) any aircraft kit box we can remember. Otaki's model is very well moulded, with fine surface detail, though by the very nature of its subject the finished model is rather slab-like and austere in appearance; unlike most aircraft, the Galaxy has no portholes even to break up the fuselage surface, and this adds to the drab effect. However, on size alone, the model makes up for the shortcomings in its appearance. Assembly is quite simple; we did not have time to make up this model completely, but a 'dry run' using Sellotape to stick the parts together revealed no obvious defects or faults and all parts fitted neatly. There is a well-produced instruction booklet (in Japanese) with good assembly diagrams. An insert in English and German gives a synopsis of the main construction and painting details. The transfer sheet is accurate and well printed and the outline of the model appears to be accurate by careful comparison with published pictures and drawings. Clearly, painting this model, with such vast expanses of plastic to cover, is a major task demanding care and attention. Priced at £3.65 and imported and distributed by Riko, 13-15 High Street, Hemel Hempstead, Herts, the Galaxy kit should appeal to all who collect 'Skyking' size models in 1:144 scale. It makes a fascinating contrast to other models in this scale. Most model shops should be stocking the kit. *C.O.E.*

Yeoman: 1:72 scale transfers

YEOMAN have taken over the range of Italian-made transfer sheets formerly distributed by Riko, and we have received samples of the most recent releases. These latest sheets seem much better printed and more accurately scaled than some of the earlier offerings. Set 37 provides markings for four Defiants and four Mosquitoes and is very well done, though we noticed the absence of the squadron leader's pennant which one of the Defiants (264 Sqn) carried. Set 42 provides markings for four Avengers and four Helldivers and is very neatly printed. Set 43 covers the Me 163, Me 262, He 162, and includes oddments for other types in the way of emblems and unit markings. Set 44 gives markings for the Yak 9 or 3 and La 5 or 7, plus odd lettering for Russian P-39s and Il-2s. This is, perhaps, the most useful of the lot for there are few transfers available elsewhere for Russian World War 2 types. All sets have leaflets giving colour side views and brief unit identification. However, no other colour scheme data is given so reference has to be made elsewhere (for instance in Profiles) to get the remaining information. The sheets cost 39p each plus 3p postage and stocks are held by Jones Bros, 56 Turnham Green Terrace, London W4, who supplied our review sets. *C.O.E.*

Continued opposite

Bombing Colours — from page 338

Ansons had black under surfaces and grey codes. Later in 1944, No 10 OTU equipped with Wellingtons including RK-W:NC715, RK-U:NC714 and ZG-C:NC480. All had their unit codes placed aft. No 19 OTU was another ex-Whitley unit which swapped to using Wellingtons which in 1944 included UO-D:NC740 and UO-I:LP804. Examples of aircraft of other OTUs of this vintage all with unit codes aft are JM-S:HE488 and JM-L:LP752 of 20 OTU, WJ-X:BK212 and JG-A:NA795 of 17 OTU, LN546:DD-S and HF623:LT-C of 22 OTU and FB-Z:LN290 and TY-M:HE411 of 24 OTU.

To the end of the war No 13 OTU trained crews for 2 Group, latterly using Boston IIAs, Mitchells and Mosquitoes, with Ansons for navigation training. Two Bostons used were BZ346: XJ-P and BZ397:XJ-O. They had green/grey finish with red codes, unit letters ahead of the roundels and the individual letter on the nose. Mitchells included FV999:FV-A, FW114:FV-D and KQ-A:FW119. Two of the Ansons in trainer schemes were AW974:SL-B and DG839:SL-D, both with red codes unit letters aft. Fighters posted to OTUs also retained their usual camouflage colouring, like Hurricanes UH-F:LF743 and UH-P:LF717 of 21 OTU. Two Martinets of that unit were UH-U:HP375 and UH-X:JN301, which wore the usual target-towing colours. They had Sky codes, like the Hurricanes.

Allied to these aircraft were those of each Group Towing Flight. Formed early in the war, these units equipped progressively with Battles, Lysanders, Defiants and Martinets and were later re-designated, No 1 Group Towing Flight (or Target Towing Flight) becoming No 1481 Flt, 2 Group Flight becoming No 1482, etc. Some expanded to include aircraft of types used operationally to give advanced gunnery and bombing training. Thus Whitley N1436 joined 1481 Flight, like T4176. Later still, some smaller flights were formed specifically to give bomber defence training for air gunners. These units equipped with Hurricanes and Spitfires, one of the latter, BM134, going to 1688 Flight. An unusual feature of some of their aircraft was that the cannon were removed leaving the barrel fairings in situ.

After leaving OTUs, crews were posted to one of 19 Conversion Units (later called Heavy Conversion Units). These were part of Bomber Command and sometimes flew on operations. Into these were gathered the Conversion Flights which many squadrons were operating in 1942. Some squadrons, incidentally, identified conversion flight aircraft with a barred individual letter. The first Conversion Unit was No 1651 formed at Waterbeach in January 1942, to supply Stirling crews. In 1944 it was at West Wickham where an aircraft in use was BS-P:R9193 thus recorded on April 14. The second unit was No 1652 formed to train Halifax crews. One of its later aircraft was GV-K:MZ637, a Halifax III with rounded wing tips. It was some time before

Lancasters could be spared for any Conversion Unit, and Manchester crews were trained at 25 OTU Finningley. In April 1942, No 1653 CU formed to train more Stirling crews, its 1944 aircraft including AK-F:EF309 which had small unit letters ahead of the roundels and an H2S radome. No 1654 Conversion Unit began to form at Swinderby on May 19, 1942, with eight Manchesters and eight Lancasters, the first supplying 5 Group crews.

No 1655 Training Unit was somewhat different. It was established as the Mosquito Training Unit to produce crews for Nos 105 and 139 Squadrons. It converted them by way of the Oxford and Blenheim V, the former used for navigational and bombing training including AB644:G1 and T1053:N1. Three of its Mosquitoes operating from Wyton in the summer of 1944 were KB153:H, DZ436:R and DZ632. Unit codes were not carried.

No 1656 CU was the first to form in 1 Group and it arose from Nos 103 and 460 Conversion Flights. It flew some Manchesters like L7437:BL-Y but later concentrated on Halifaxes, then Lancasters such as NN814:EK-O.

Expansion of the Conversion Units continued until the end of 1943 and later they were concentrated in 7 Group. In November 1944, Stirlings were phased out since 3 Group was then Lancaster equipped and sufficient crews were available already for the airborne forces. Some of the last Stirlings in use, with 1657 HCU, were LK613:XT-W, LK608:XT-X, LK434:XT-Y and LK608:XT-Z, all in use in November 1944. Most of the HCUs had a flight of Oxfords for navigational and bombing training as well as blind approach training. Indeed, some of their Oxfords retained the two yellow triangles associated with aircraft in the latter rôle. Some BAT flights had earlier used Wellingtons as well as Whitelys like N1477 used by No 2 BAT Flight in 1941.

Late 1943, special units known as Lancaster Finishing Schools were formed converting crews to Lancasters who had previously done conversion to four-engined aircraft on Stirlings and Halifaxes. Each Lancaster Group operated an LFS, 3 Group forming theirs at Feltwell in December 1943. One of its aircraft was A5:F:ND623/G, codes in the usual positioning.

One other training unit deserves mention, the Navigation Training Unit at Warboys. It formed at Gransden on April 10, 1943, and moved to Upwood and the Warboys satellite in June. Its aircraft came mainly from 8 Group units and by June Mosquitoes were in use although mainly it used Halifax II srs 1 and Lancasters, coded QF. Lancaster QF-T was EE317 in April 1944, these aircraft equipping 'B' Flight. Some of them, like ED842, were modified for dual control.

The survey here is not intended as an exhaustive one where the training element of Bomber Command is concerned. There were many more flights, for instance like No 1429 which trained crews for the Czech Squadron, No 311. But the brunt of training rested on the OTUs and the Conversion Units.

Michael J. F. Bowyer

New Kits — from opposite page

model shop at a price of £1.65, and it is a splendid addition to the series. *D.L.*

Myrogram: metallised letters

CONVEX Ltd, 41 Brecknock Road, London N7, have sent us a sample of a sheet of metallised press-out lettering which is self-adhesive and weather-proof. The letters are capitals about 1/4 inch high and the set consists of a complete run of the alphabet, some geometric shapes, an arrow, and two 'frames'. Sheets are available in either gold or silver 'plated' finish. Style of the letters is of the compressed type and we cannot see any direct application for use on models as such. However, they could be of value for titling a showcase or display stand, while the waste material could well be useful when cut to shape as it could be used for bright trim rather in the style of Metalkin. Domestic and display purposes are the main uses for which these Myrogram letters are intended. No price was quoted to us, but we imagine it to

be on the low side. The sheets are sold through normal stationery outlets. *C.O.E.*

Stoppel: transfer sheets

WE have recently received a new sheet of decals from Stoppel Decals in Denmark. This manufacturer has been inactive for some time and it is very pleasing to see that production of new sheets has started once again. No 45 in the range contains West German Luftwaffe and Kriegsmarine crosses, fin flashes, Kriegsmarine 'anchors', letters and numerals. The latter are outlined in white on black letters in the style used by contemporary German aircraft. Both the register and strength of colour on this sheet is well up to standard and they adhere to models with ease.

This is indeed a valuable addition to the already comprehensive Stoppel range and although no UK prices are yet available it is expected that the major retailers that already stock this line will be placing orders. *A.W.H.*



Tamiya: 1:700 scale 'Musashi'

ONCE again Tamiya have produced a small scale ship kit of fantastic detail. Complete with the usual revolving turrets and elevating guns, the model includes minutely detailed floatplanes, a feature we remarked upon when reviewing earlier releases in this series, catapults and a crane for recovering the aircraft after launching. Distributed by Riko, 13-15A High Street, Hemel Hempstead, Herts, the kit is available from any large

Letters to the Editor

Corsair details

I SHOULD like to congratulate Alan W. Hall on his Corsair articles. A series of articles on this aircraft, widely acknowledged to be the finest piston-engined fighter of the war, has been long overdue. However, there are a few points in Mr Hall's article which I feel need clarification.

Firstly, in the text of Article 2, Mr Hall states that there were two Corsair night-fighters, whereas there were in fact three: the F4U-2, the F4U-5N and the F4U-4N (a fourth similar machine to this was the F4U-4E). The F4U-4N carried AN/APS-6 radar and the F4U-4E AN/APS-4, both systems being contained in radar 'buckets' similar to that on the F4U-5N.

Secondly, in Article 1, Mr Hall correctly refers to the Fleet Air Arm's F6-1Ds as Corsair Mk IVs. However, in Article 2, he changes his mind, incorrectly describing the Mk IV as the British variant of the F4U-4 (these machines, never received, were F4U-4Bs, and would presumably have been Corsair Vs). So Mr Hall did not explain how to produce the F4U-4 in Article 1, but his drawings in Article 2 more than suffice.

Referring to the drawings, I have not yet measured them, but I have noticed that the F4U-7 is shown with an F4U-4-style canopy. Now, in all the clearly legible photographs which I have seen (including quite a few of Flotilla 14 machines) the F4U-7 has the larger, more globular F4U-5-style canopy. Perhaps Mr Hall could state whether the machine he has drawn did in fact have an F4U-4 hood?

It seems to me to be regrettable that Mr Hall did not mention in his conversion notes that the cowl changes should be accompanied by changes in fuselage length. The F4U-1D was 33 ft 4 in long, whereas the F4U-4 was 33 ft 8½ in and the F4U-5, AU-1 and F4U-7 were 34 ft 6 in (which produces a substantial difference, even in 1:72 scale).

However, since the Airfix model is somewhat lacking in cowl flaps, the length problem can be suitably solved by moving the cowl forward and filling in the resulting hole with body putty and plastic card cowl flaps.

Finally, anyone modelling the VMF-214 aircraft should note that the squadron badge was usually carried on the port or starboard side of the cowlings. I am afraid that I have no photographs of this particular machine but perhaps someone can say whether or not this aircraft had the badge on the starboard side. Anyone not familiar with the 'Blacksheep' badge will find a good photograph on page 8 of Profile 150.

James D. Scott, Arbroath, Angus.

Buyers beware

FOR some time now I have been meaning to write to you about the rather dubious practices of some of your advertisers. It is something which only you can do something about and I believe

CONTRIBUTIONS

Letters to the Editor selected for publication entitle the senders to each receive a free Airfix plastic construction kit, and the publication of photographs from readers is similarly rewarded. As from this issue a new scheme comes into force whereby Airfix Products Ltd award the kits on the following scale:

ONE letter or photograph published is rewarded by any kit from Series 1-6 inclusive. For TWO letters or photographs any one kit up to and including Series 9 can be chosen, or alternatively two kits up to Series 6. For THREE separate contributions (eg, photographs) the entitlement is one kit up to Series 12 or three kits up to Series 6. Readers can make their choice on the special card which we send out after publication. The kits are supplied direct by Airfix Products Ltd.

We receive a large volume of mail from readers; all letters are read and we answer or acknowledge as many as possible provided that a SAE or stamp is included for reply. The Editor cannot accept responsibility for safe keeping of contributions though every care is taken. Opinions expressed by correspondents on this page are their own and do not necessarily reflect the views of the Editor or Airfix Products Ltd.

you have a duty to your customers in this matter. I refer to the practice of advertising a product months in advance of it arriving in the shops, also offering kits at reduced prices (samples stocks, etc) and when the money is forwarded the said kits are already sold out and 'would you order some other kits instead'. In the September 1971 issue on page 54 is an advert which gives the price of conversions for the Hunter T7/8 and Lightning T3/T5 as 60p (3 x 20p) whereas the kits really only cost 20p. Also, for overseas readers, only one advertiser points out that such persons are exempt from British purchase tax. You may say let the buyer beware—but please remember many of the buyers are just kids who scrounge a few bob from indulgent fathers. If you print this letter it would go a long way towards putting modellers on their guard.

George Harvey, Waterford, Ireland.

The Publishers of Airfix Magazine would like to point out to readers that they do have the right to refuse to accept any advertisement without necessarily giving a reason, although generally such refusals are restricted to products which they consider to be either dangerous or undesirable.

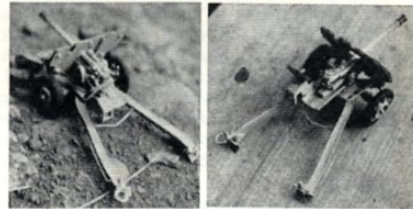
While every effort is made to check the bona fides of advertisers and the subjects of their advertisements, the Publishers obviously cannot accept any direct responsibility for disputes which may arise.

Very often, after having looked into a particular problem, it is found that a complaint turns out to be the result of a genuine misunderstanding. In such cases, the fault lies with the customer who has, for instance, omitted to include his return address, sent an incomplete remittance, or written out an order which is unintelligible.

The Publishers would also point out that the general level of response received by advertisers in Airfix Magazine is very high indeed and therefore often the goods advertised, sometimes available only in limited quantities, have already been sold. This same high response then means that the advertiser concerned has to return a large number of individual remittances, all of which takes time, particularly—in the case of classified advertisements—when the advertiser is usually a private individual rather than a company.—EDITOR.

Panzerbüsche 41

HAVING followed Robert C. Gibson's excellent series of articles on the 'Fallschirmjäger', I noted with interest that in his method of modelling the 'Panzerbüsche 41' in 54 mm scale and his accompanying drawings, he has inadvertently misinterpreted the gun laying mechanism. The drawings show the gun traversing mechanism (which was completely manual) as being attached directly to the breechblock as an integral extension. As the firing mechanism was contained in this area, the results of the recoil



PzB41 model mentioned in text.

action of the gun on the poor gunner would be at least broken wrists and a crushed chest had this layout been followed in practice.

In fact the traversing and firing mechanism of the gun were located on the back left-hand side of the loading tray, which was a fairly substantial extension, on that side, of the gun cradle. A direct aiming, telescopic type sight was fitted to the top of this mechanism, which was also protected by a small sandwich type shield. The photographs show the location and relative size of this part of the equipment quite clearly. Admittedly my model shows the field mounting of the gun but the barrel, breech, shields and, of course, the traversing assembly, were identical to those on the airborne version.

W. G. Evans, Newcastle-upon-Tyne.

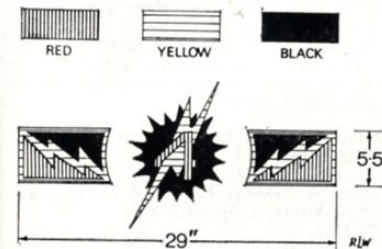
Correction

I HAVE just received the December issue of Airfix Magazine, and read Mr Gething's letter concerning the Harriers of 4 Squadron RAF. I hope that you will be able to include the following comments, in order to save readers who wish to model one of these Harriers a good deal of work, and also to correct the information given on the design of

the 4 Squadron markings and the new red/blue roundels.

Firstly, Mr Gething's statement that there are no transfers available of 4 Squadron markings is incorrect; for some weeks, Modeldecals Set 11 has been available from Modeltoys of Portsmouth, and this set contains, amongst other items, the complete Squadron markings for both 4 and 20 Squadrons, our 4 Squadron machines being XV789 'G' as assigned to Flt-Lt J. W. Thorpe. In addition, these decals include the new red/blue roundels and fin flashes, and Mr Gething's suggestion of using wartime 'B'

HARRIER - 4 SQUADRON EMBLEM



type roundels is misleading, since the proportions of these wartime roundels differ from the type now used; also the wartime colours were different from those now used, the blue being much darker and the red being much duller in the former case.

For modellers who may have already finished their model as XV783 as suggested by Mr Gething, two further items will need adding. Firstly, the name of the pilot this machine is assigned to, Flt-Lt R. Fowler, should be shown in capital letters under the starboard side of the forward cockpit, on the real machine this being in 2 inch high black lettering; secondly, the aircraft code letter E should be included each side of the fin placed centrally above the fin flash (12 inches high on the real aircraft). This information is correct as of November 1970.

Regarding the design of 4 Squadron's nose markings, the attached drawing shows the correct detail of these, and they are more complicated to paint than indicated in Mr Gething's drawings.

While on the subject of Harriers, there is an interesting point of which many modellers are not aware, viz, that the forward exhaust nozzles on each side of the fuselage are finished in Dark Green paint (ie, the camouflage shade), and are not burnt metal. This is because these forward exhausts expel cold air, and not hot exhaust, from the engine.

R. L. Ward, Cove, Hants.

Mr Gething has since written to us pointing out the errors in his own letter. We had held the letter for some months prior to publication and the facts as stated were those which Mr Gething had been able to glean at the time of writing the original letter.—EDITOR.

Misinformation

I WRITE to protest at the misinformation published on the Vulture Vengeance in Michael Bowyer's article in your December issue. Here are some facts to set the records straight.

Four squadrons (45, 82, 84, 110) were re-equipped with the Vengeance during late 1942 and early 1943. Training concentrated on dive-bombing from the outset. The thing never did have a bomb-sight and could no more do 'high level bombing missions' than a drake can lay eggs.

All four squadrons came to the same conclusion: The best 'bombsight' was a half-inch yellow line painted on the cowl at mid-point, forward of the centre screen up to the nose. You organised yourself as near vertically above your target as you could, up to 10,000-12,000 feet, then rolled over and pulled through. The thing was pleasant and stable in the dive, airbrakes very effective, and you simply used the sight line to aim the whole thing at the target. Ideally, you were in a 90° dive, and around 3,000 ft you pressed the button and pulled like hell.

Used always in this way, the four squadrons were employed for army close support on the Arakan and Imphal fronts, and for strikes further afield in Burma.

Vengeances were very popular in the close support role, as the accuracy was very high and only the odd 500 lb bomb landed on our own chaps.

The usual load was 2 x 500 lb (internal) and 2 x 250 lb (wings). They did try 4 x 500 lb, but it wouldn't get off the ground.

Vengeances dive-bombed happily through the dry seasons of 1943 (Madhaganj was hundreds of miles away from any Jap, 110 operated from Chittagong), 1943-44 and 1944-45. In 1945 they were withdrawn. The squadrons were to re-equip with the Mosquito. A conversion unit was set up at Yelahanka (Bangalore) to effect this. Unfortunately, the early Mosquito was bonded together with evil glue (not Airfix, of course!) and some aviators found themselves strapped to a seat in mid-air, a cloud of splinters a quarter-mile astern and two Merlin-shaped holes in the Deccan plateau below. For a glorious, panic-stricken week, the cry was 'Mossies out, Vengeance in', the erstwhile students became instructors and vice versa. Then the glue problem was solved and the day of the Vengeance was over. VJ Day came very soon after, in any case.

Vengeances were never, as far as I know, intercepted by Jap fighters. This was just as well, for they were too clumsy to fight and too slow to run away. The description (in the article) of them as a 'latter day Fairey Battle' was exactly right: I believe Sir Basil Embry tried one and reached the same conclusion. They were often hit by ground small-arms fire but, being built like battleships, rarely came to harm.

Besides the RAF squadrons, they equipped 8 (RIAF) Squadron in 1944, and, I believe, another RIAF squadron, but I am not sure of this. I believe the RAAF also used them in New Guinea.

'Never used as dive-bombers' indeed! Flt-Lt Dennis O'Leary, Northallerton, Yorks.

54 mm kits

I HAVE recently bought one of Airfix's new 54 mm kits, the British Coldstream Guardsman 1815.

It would seem that there are one or two mistakes in this kit:

1. The illustrations show the guard wearing a white over red cockade and wings on his shoulders; white over red signifies a battalion company who did not wear wings, only a tuft of white worsted. Wings are worn by grenadiers and light infantry battalions.

2. The loops in the illustrations are equally spaced (not on the model), which only the 1st Foot Guards had, also they are bastion shaped when they should end in a plain point. Other than these details, the kit is value for money and can be painted up as a number of different line regiments with very little trouble.

J. Simm, London N4.

More bombs

THE article by B. Hygate on Luftwaffe bombs in the December issue of Airfix Magazine was most interesting. I served with a Bomb Disposal Section of the Royal Engineers from 1940 to 1946 and had the doubtful privilege of examining some of these bombs at close quarters.

The Museum of the Bomb Disposal school had a large collection of the various German bombs dropped on this country. This was located during the war at the school of Military Engineering in Ripon.

When we were excavating a UXB (unexploded bomb) the colour of the body or the type marking on the fins did not give us any help in disposal. The body colouring was removed by its passage through the ground. The cone and tail fins were wrenched off on impact and were usually unrecognisable. We were more concerned with identification and removal of the fuses.

Bombs up to 500 kg were painted dark green, and larger bombs, light Cambridge blue. Large bombs carried externally were sometimes painted matt black. On small bombs up to and including SC 250 the type marking was done in one of three methods. The entire cone and fins were painted, or the cone only was painted, or a 1½ inch wide stripe was painted on the quadrants of the cone. On the larger bombs the stripe was 2½ inches wide. In addition to the colours mentioned in the article, green was used to denote splinter and fragmentation bombs. Bright red was used to denote good splinter and blast effect, eg, SD bombs up to and including SD 500. Dark blue was used to denote bombs with good penetration, such as SD 1000 and SD 1400. The SD 1700 had an intermittent blue and yellow stripe.

The fusing system on all German bombs of 50 kg and above was electrical. The drawing of the SC 250 is incorrect, in that it should have two fuse pockets. The forward fuse pocket is positioned approximately midway between the suspension lug and the join of the nose section to the body. As far as I can remember, this was also true of the SC 500. The fuse itself was about 2 inches diameter with a small projecting boss about 1 inch diameter in the centre. This projecting boss is actually a small twin-pin socket through which an electric charge was passed to activate the fuse.

The nose ring shown on the SC 1000, SC 1800 and SD 1700 is called a kopfring and was fitted to minimise deflection when the bomb hit water.

J. H. MacPhee, Paisley, Renfrewshire.

Books—from page 339

armament, and other characteristics of these famous destroyers. Refit changes, modernisation, modifications, colour schemes, and so on. Line drawings show all sub-variations in the class and all guns and weapons are drawn in detail. Between them the two books say just about all anyone would need to know on the 'Tribal' ships.

Warships of the British and Commonwealth Navies.
H. T. Lenton.
Ian Allan Ltd, Terminal House,
Shepperton, Surrey.
£2.10.

THIS is the third edition of a well-known reference book, highly detailed and well illustrated. It is packed with text and data and is an essential buy for warship enthusiasts. This edition is, of course, fully up-dated to take account of recent scrappings and new construction. Otherwise it follows its established format.

Discovering Ship Models.
Norman Boyd.
Shire Publications, Tring, Herts.
30p.

A NEAT little paperback in the familiar 'Discovering' series, this book covers the history and development of model ships from the days of the Pharaohs to the modern plastic kit. Of necessity it is quite brief, but the coverage is wide. There is a useful list of places (eg, museums) where good displays of ship models can be seen.

MILITARY

Scottish Regiments and Uniforms, 1660-1914.
A. H. Bowling.
£1 (paperback); £1.50 (hardback).
British Cavalry Standards.
Dino Lemonofides.
£1.25 (paperback); £1.75 (hardback).
Almark Publishing Co Ltd, 270
Burlington Road, New Malden, Surrey.

TWO more publications in the usual Almark style, the former is a new expanded version of an early Almark book, this time with many more drawings and extra pictures and colour plates. Of special interest are the details given of militia regiments and some 18th century regiments long ago disbanded. *British Cavalry Standards* is a companion volume to the earlier *British Infantry Colours* and follows exactly the same style. There are excellent colour drawings of the guidons and scale size templates of value to model soldier collectors.

AFV Profile 32; M6 and M26.
AFV Profile 33; German Armoured Cars.
35p each.
Modern US Armoured Support Vehicles.
Col R. J. Icks.
£1.50.
Profile Publications Ltd, Coburg House,
Sheet Street, Windsor.

LATEST two AFV Profiles are in the usual style, No 32 having the most to offer as far as unusual types are concerned, for it includes the post-war



The new Tamiya 1:35 scale German officer and NCO figures reviewed but not illustrated in the last issue.

history of the M26 with its many post-war variants, several not previously illustrated. No 33 has excellent artwork but it covers ground more familiar to most AFV enthusiasts with little that is new in the way of illustrations. At the modest price, however, both are good value. *Modern US Armoured Support Vehicles* is first of a new series from Profile. In the usual Profile page format it is, however, in hardback book form with well over twice as many pages as a Profile. This particular title will certainly be very welcome for it covers succinctly the post-war US Army APCs, LVTs, and SP equipment, information on which is sparsely recorded elsewhere. This is a very good book, nicely presented, which fills a gap in existing AFV literature. Colour and line drawings are useful for the modeller.

Model Soldiers.
Peter Blum.
Arms & Armour Press, 2-6 Hampstead
High Street, London NW3.
75p (paperback); £1.30 (hardback).

A BRITISH edition of a well-known American book, this publication gives a neatly presented coverage of the basic principles of assembling and painting model soldiers, mainly in 54 mm scale. Horses and simple dioramas are included. There is a section on converting and particularly good, clear hints on painting. All the illustrations are drawings, very sharply executed and easy to follow. This is an excellent primer on its subject, though curiously enough there is not a single illustration of an actual model to show the principles put into practice. This, we feel, would have made a good book even better.

Vehicles of the German Wehrmacht.
TLO Publications, 23 Runnymede Road,
Egham, Surrey.
50p.

THIS small paperback is really an album to take 25 glossy picture cards (actually photographs) showing some principal German military vehicles of 1939-1945. The purchaser pastes the cards into the marked spaces in the album and descriptive text is given underneath each picture. Card 25 shows some makers' badges rather than a vehicle. All the vehicles shown actually exist at the

present time, being from Tony Oliver's collection and sometimes seen in films.

The Alma, 1854.
Henry Harris.
Charles Knight & Co Ltd, 11-12 Bury
Street, London EC3.
90p.

A FURTHER title in the 'Battles for Wargamers' series, this inexpensive book gives a good, readable account of the famous Battle of Alma in the Crimean War. There are several sketch maps and tables supporting the text. However, apart from an introduction by Peter Young, which is the same as in previous books in the series, there is nothing at all in the book about wargaming as such other than a brief mention in the preface. This is a pity as a previous title, *First Bull Run*, was really useful on the wargaming aspect and led us to expect similar coverage in this subsequent book.

German Army Uniforms and Insignia, 1933-1945.
Brian L. Davis.
Arms & Armour Press, 2-6 Hampstead
High Street, London NW3.
£4.25.

PRODUCED in what amounts to 'encyclopaedia' style, this large book really covers its subject in immense detail. The contents are split into three parts, Ranks and Insignia, Badges, and Uniforms, and each section is further split into sub-sections dealing with specific items. Everything from parade dress to sports vests is described. Colour plates show collar patches, epaulettes and other details. There are over 350 illustrations, most of them not previously published. The book is beautifully produced and will be an essential reference work for all uniform enthusiasts interested in the German Army.

The Life Guards, Dress and Appointments, 1660-1914.
Charles Stadden.
The Foot Guards Regiments, 1880-1914.
Compiled by A. H. Bowling.
Almark Publishing Co Ltd, 270
Burlington Road, New Malden, Surrey.
£1.25 each (paperback); £1.75 each (hardback).

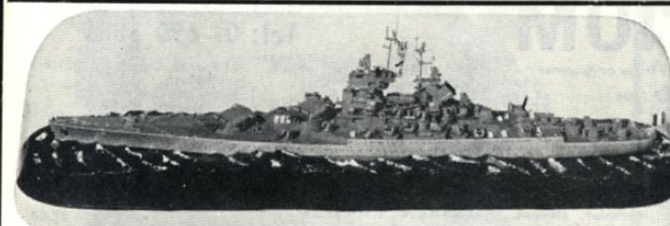
THESE are two contrasting volumes on famous British regiments. Charles Stadden's book is mostly drawings and photographs, plus eight colour paintings, showing how the Life Guards uniform has evolved over the years to its present well-known form. There is a brief history of the regiment but the text is mainly descriptive, relating to the uniform drawings which show much fine detail in the Stadden tradition. A. H. Bowling's book is entirely pictorial, with many rare pictures showing all the Foot Guards regiments at the height of the British Empire's power. There is a brief introduction, but the rest of the book is devoted to big pictures. Included are eight colour plates reproduced from old prints and postcards of the period.

Patrick Stephens Ltd have taken over from Ian Allan Ltd the UK, British Commonwealth, and European distribution of the series of books published in USA by WE Inc. The titles are mainly of military, naval, and aviation interest, and a list is available (send a large SAE) from Patrick Stephens Ltd, 9 Ely Place, London EC1.

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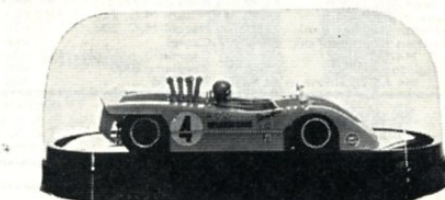
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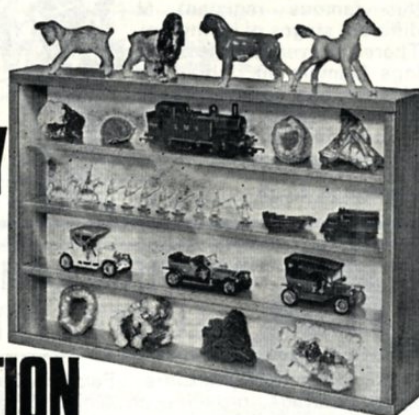


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